SECTION 1: OWNER INFORMATION

In this section you will provide contact information for the applicants and the landowners for the property on which the project is located. The application must designate a primary applicant, who will act on the behalf of all of the applicants. Only one primary applicant may be designated for your application. The primary applicant serves as the primary contact for matters related to the application, unless an Agent is designated in the next section. Additional co-applicants of the application may be designated as non-primary applicants.

(1) Provide information for the primary applicant below.

Primary Applicant

First Name

Middle Name

ℹ️ Last Name or Company Name

Turlock Irrigation District and Modesto Irrigation District

Contact Person for Company

Michelle Reimers

Mailing Address

PO Box 949

City

Turlock

State

California

Zip

95381

Phone Number

(209) 883-8530

Email Address

mareimers@tid.org

Provide the applicant's legal entity type.

Government (State/Municipal)

(2) Are there additional applicants (non-primary applicants)?

○ Yes ◉ No

(3) Are there any lands where the proposed diversion and/or storage facilities are located that are not owned by any of the applicants?

○ Yes ◉ No

(4) Are there any lands where the proposed place of use would occur that are not owned by any of the applicants?

◉ Yes ○ No

Provide the contact information for these owners below.

Landowner Information

First Name

Middle Name

Last Name or Company Name

Contact Person for Company

Mailing Address

City

State

Zip

Phone Number

Email Address

Provide the landowner's legal entity type.

Written Authorization or Easement?

-Select-

Describe the portion of your place of use that is located on the associated lands.

See Attachment No. 3, Exhibit A

Landowner Information

First Name

Middle Name

Last Name or Company Name

Contact Person for Company

Mailing Address

City

State

Zip

Phone Number

Email Address

Provide the landowner's legal entity type.

Written Authorization or Easement?

-Select-

Describe the portion of your place of use that is located on the associated lands.

Click here (../Content/Sec 1_Landowner Information (POU).xlsx) to provide the contact information for additional owners of any lands where water use occurs.
Once complete upload the document at the bottom of the page.

Upload copies of any written authorization or easement allowing access to the place of use located on properties associated with the landowners listed above or in the additional owner upload document provided above. All easements must be uploaded together as a multiple page file. Upload all documents at the bottom of the page.

Please upload all requested documents here:

Choose Files No file chosen

Upload

(Uploaded files:)
Delete Attachment 3 - Point of Diversion.pdf (/MT/TakeSurvey/Download?fileName=1072_438324_84017_AppropriativeWa__Section1Upload_1.pdf)
Delete Exhibit A to Attachment 3.pdf (/MT/TakeSurvey/Download?fileName=1072_438324_84017_AppropriativeWa__Section1Upload_2.pdf)
Delete Exhibit B to Attachment 3.pdf (/MT/TakeSurvey/Download?fileName=1072_438324_84017_AppropriativeWa__Section1Upload_3.pdf)

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SECTION 2: AGENT AND CONSULTANT INFORMATION

Section 1: Owner Information

You may designate an Agent and/or Consultant that will be associated with your application. An Agent may be designated to act on behalf of the owner(s) of the application. Consultants may be designated to assist with certain aspects of processing of the application. While designation of an Agent and/or Consultants is optional when submitting your application, please note that the Division of Water Rights may require you to provide information during the processing of your application that can only be developed by certain qualified professionals.

(1) Have you designated an agent to act on your behalf in matters pertaining to the water right application?

○ Yes ◉ No

Water right applications commonly involve technical and legal issues that may require the assistance of an engineer, environmental science professional, and/or an attorney. While the Division of Water Rights does not recommend or endorse any particular firm or consultant, the Division of Water Rights maintains a list of firms (https://www.waterboards.ca.gov/waterrights/board_info/contacts.html) that have indicated they perform services in the area of California water law or water rights consulting. Once your application is submitted you may have a limited amount of time to identify the qualified engineering and environmental consultants that you have elected to work with if your application is accepted.

(2) Have you selected an attorney and/or consultant to prepare the technical activities associated with processing your application?

◉ Yes ○ No

Engineering Consultant

First Name

Middle Name

Last Name or Company Name

Contact Person for Company

Mailing Address

City

State

Zip

Phone Number

Email Address

Provide the engineering consultant's legal entity type.

Environmental Consultant

First Name

Middle Name

Last Name or Company Name

Contact Person for Company

Mailing Address

City

State

Zip

Phone Number

Email Address

Provide the environmental consultant's legal entity type.

Attorney

First Name

Middle Name

Last Name or Company Name

Paris Kincaid Wasiewski LLP

Contact Person for Company

Valerie Kincaid / Bill Paris

Mailing Address

1800 J Street

City

Sacramento

State

California

Zip

95811

Phone Number

(916) 599-5498

Email Address

vkincaid@pariskincaid.com

Provide the attorney's legal entity type.

Limited Partnership

Click here (../Content/Sec 2_Consultant_Attorney Information.xlsx) to identify additional consultants and/or attorneys. Once complete upload the document below.

Choose Files No file chosen

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SECTION 3: PERMIT TYPE

Section 1: Owner Information

Section 2: Agent and Consultant

This application form may be used to either apply for a standard or temporary water right permit. For more information regarding the various types of water right permits, please review the Division of Water Rights Permitting web page (https://www.waterboards.ca.gov/waterrights/water_issues/programs/applications/).

What type of water right permit are you applying for?

- (●) Standard Permit
- ( ) Standard Permit (Streamlined processing for Groundwater Recharge)
- ( ) Standard Small Hydroelectric Permit
- ( ) Temporary Permit for Small Hydroelectric
- ( ) 180 day Temporary Permit
- ( ) 5-Year Temporary Permit for Diversion to Underground Storage

Please upload all requested documents here:

Choose Files No file chosen

Upload

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SECTION 4.1: ENGINEERING MAP

Section 1: Owner Information

Section 2: Agent and Consultant

Section 3: Permit Type

Based on your specific project parameters, California Code of Regulations section 717 (http://govt.westlaw.com/calregs/Document/I9A9D7890D45A11DEA95CA4428EC25FA0?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=(sc.Default)&bhcp=1&ignorebhwarn=IgnoreWarns) requires the submission of an engineering map, prepared and certified by a professional engineer or land surveyor. Additional instructions, definitions, and examples are provided here (../Content/Map, Engineering Section 4.1 Draft .docx).

Upload your engineering project map, prepared in accordance with California Code of Regulations section 717 below.

Upload Engineering Map:

Choose Files No file chosen

Upload

(Uploaded files:)
Delete Exhibit A to Attachment 3.pdf (/MT/TakeSurvey/Download?fileName=1072_438324_67529_AppropriativeWa__EnginMapUpload_1.pdf)
Delete Exhibit B to Attachment 3.pdf (/MT/TakeSurvey/Download?fileName=1072_438324_67529_AppropriativeWa__EnginMapUpload_2.pdf)

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SECTION 4: MAP REQUIREMENTS

Section 1: Owner Information

Section 2: Agent and Consultant

Section 3: Permit Type

In this section, you will determine if an engineering map or a general project map is required for your project. Please answer the following questions to determine the type of map required for your project.

Does your project involve the diversion of water at a rate exceeding 3.0 cubic feet per second?

◉ Yes | ○ No

Does your project propose a reservoir with a surface area greater than 10 acres?

◉ Yes | ○ No

Does your project involve the diversion of more than 1,000 acre-feet per year by underground storage?

◉ Yes | ○ No

Does your project involve the storage of water in a reservoir with a dam height greater than 6 feet and a capacity of 50 acre-feet or more? *Note: if this is the case your project may be subject to the Division of Safety of Dams (https://water.ca.gov/Programs/All-Programs/Division-of-Safety-of-Dams).*

◉ Yes | ○ No

Does your project involve the storage of water in a reservoir with a dam height of 25 feet or higher and a capacity greater than 15 acre-feet? *Note: if this is the case your project may be subject to the Division of Safety of Dams (https://water.ca.gov/Programs/All-Programs/Division-of-Safety-of-Dams).*

◉ Yes | ○ No

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SECTION 5: PROJECT DESCRIPTION

Section 1: Owner Information

Section 2: Agent and Consultant

Section 3: Permit Type

Section 4: Map Requirements

In this section you will describe, in detail, the operations and features of your project. You will also be asked to identify other water rights you hold and other sources of water you have access to.

(1) Provide a detailed description of the project, project objectives, and operations. The information should describe the point where water is diverted from the natural watercourse until it is put to its final use (i.e. how water is transferred from a diversion point to a place of use), including diversion works, delivery and return pipelines, reservoirs, etc., and whether facilities are existing. Include in your description anticipated construction activity and area to be graded or excavated, construction dates of each project feature, storage facility, etc. If your project involves diversion to underground storage you will be requested to provide a detailed description under Section 14. For projects that involve diversion to underground storage, please type 'refer to Section 14' below.

See Attachment No. 1

(2) Please select the option that most accurately describes your project below.

- ○ I have not initiated construction of my project features.
- ◉ I have initiated construction for some of my project features and some future construction is proposed.
- ○ I have completed construction of all my project features and no future construction is proposed.

Provide the following: (1) description of the project features that have already been constructed; (2) construction dates for completed project features; (3) description of the project features that require construction; (4) proposed construction start and end dates to complete the project; and (5) verification project features have already been constructed (ex. water diversion records, reservoir surveys, grading permits, historical aerial photographs, etc.).

See Attachment No. 1

Are you uploading a document to supplement your answer? If so, please upload at the bottom of the page.
◉ Yes | ○ No

(3) Estimated time until water will be applied to beneficial use to full extent proposed in this application:

Number of Years	20

Describe the reason you are requesting the amount of time indicated above.

See Attachment Nos. 1 & 2

(4) If you claim an existing right or have you been granted an appropriative water right to meet the beneficial use requirements of the project described in this application, provide the number of the registration, permit, license, court decree or statement of water diversion and use, if applicable. If other applies, please describe.

N/A

(5) If your project involves the use of purchased water, contract water, groundwater, wastewater, etc., describe the use below (i.e. where is water purchased from, how many wells onsite, etc.).

N/A

(6) Is your project contingent on funding from any of the sources below?

- [ ] Federal Funding
- [ ] State Funding
- [ ] Philanthropic Funding

(7) Provide a complete set of color photographs of the proposed project site, with dates and labels on the photographs showing the following:

1. all point types (i.e. points of diversion, points of rediversion, offstream reservoirs, etc.)
2. vegetation along the stream channel immediately upstream and downstream of each point type (if located on a stream)
3. the place of use.

Upload all documents at the bottom of the page.

(8) If desired, you may upload a video presentation of your project. Upload at the bottom of the page.

Please upload all requested documents here:

Choose Files No file chosen

Upload

(Uploaded files:)
Delete Attachment 1 - Project Description.pdf (/MT/TakeSurvey/Download?fileName=1072_438324_84618_AppropriativeWa__Section5Upload_1.pdf)
Delete Attachment 2 - Purpose Amount and Season.pdf (/MT/TakeSurvey/Download?fileName=1072_438324_84618_AppropriativeWa__Section5Upload_2.pdf)

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SECTION 6: PURPOSE OF USE

Section 1: Owner Information
Section 2: Agent and Consultant
Section 3: Permit Type
Section 4: Map Requirements
Section 5: Project Description

Water diverted must be for some useful or beneficial purpose. In this section, you will identify all applicable beneficial purposes (purposes of use) for your project. For each purpose of use you identify, you will be asked to provide an estimate of the amount of water you are requesting to divert. Please refer to California Code of Regulations, section 697 (https://govt.westlaw.com/calregs/Document/I94963270D45A11DEA95CA4428EC25FA0?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=(sc.Default)) for assistance in calculating the reasonable amount of water for certain uses. Items may be entered into the tables below by clicking the "+" sign, edited using the pencil icon, and deleted using the trash icon.

You will also be asked to identify incidental uses for your project. An incidental use of water is generally considered to be a use that occurs only as a consequence of the diversion of water for a primary use and consumes a minimal quantity of water. As a reminder, if your project involves both consumptive and nonconsumptive primary uses, you may need to file a separate application (California Code of Regulations, section 686 (https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=I907DEB10D45A11DEA95CA4428EC25FA0&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default))).

While you continue through this application, please keep in mind that the amount of water, season of diversion, and the maximum rate of water requested under this application cannot be increased once submitted (California Code of Regulations, section 699 (https://govt.westlaw.com/calregs/Document/I95A817A0D45A11DEA95CA4428EC25FA0?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=(sc.Default)&bhcp=1)).

(1) Identify your primary use(s) below. Once a use is selected, additional information will appear requesting that you provide justification for the estimated amount of water needed for each use.

☐ Aquaculture

☑ Domestic

DOMESTIC USE	
No. and type of Residences Served	See Attachment No. 5
Separately Owned?	-Select-
No. of People Served	

Est. Daily Use per Respective Use	
Incidental Domestic Stockwatering	
Number and Kind of Domestic Stock	See Attachment No. 5
Incidental Domestic Dust Control	
Dust Control Area (Sq. ft.)	
Incidental Domestic Irrigation	
Area of Lawns and Domestic Gardens (Sq. ft.)	
Estimated Annual Amount (Acre-feet per year)	

Describe method of use and provide the basis for your determination of the amount of water needed for Domestic use.

See Attachment No. 5

☑ Fish and Wildlife Preservation and Enhancement

Specific Species and Habitat Type that will be Preserved or Enhanced	Describe How the Specific Species or Habitat Type will be Preserved or Enhanced	Describe method of use and provide the basis for your determination of amount of water needed	Estimated Annual Amount (acre-feet per year)	
Not found				

☑ Frost Protection

Crop Type	Acres	Rate at Which Water is Applied (gallons per minute per acre)	Method of Application*	Other*	Season of Water Use: Beginning Date (MM)	Season of Water Use: Beginning Date (DD)	Season of Water Use: End Date (MM)	Season Water Us End Dat (DD)

Not found

*If multiple methods are used on the same plot of land, add secondary methods to the “Other” column. If “Other” is selected as the primary method, please describe in the “Other” column as well.

Describe method of use and provide the basis for your determination of the amount of water needed for Frost Protection use.

See Attachment No. 2

☐ Heat Control

☑ Industrial

Type of Industry	Describe method of use and provide the basis for your determination of amount of water needed	Estimated Annual Amount (acre-feet per year)	
Not found			

☑ Irrigation

Crop Type	Acres	Method of Irrigation*	Other*	Water Use (acre-feet per year)	Season of Water Use: Beginning Date (MM)	Season of Water Use: Beginning Date (DD)	Season of Water Use: End Date (MM)	Season Water Us End Dat (DD)
Not found								

*If multiple irrigation methods are used on the same plot of land, add secondary methods of irrigation to the “Other” column. If “Other” is selected as the primary method of irrigation, please describe in the “Other” column as well.

Explain how you estimated the amount of water needed for Irrigation use and upload supporting calculations at the bottom of the page.

See Attachment Nos. 1, 2, & 5

☐ Mining

☑ Municipal

Enter use information for the current year on the first line. Enter the average daily use and the average rate of diversion in the maximum month of use for the period.
On each subsequent line, project maximum month and annual use data for 5-year periods until total use reaches the face value of the amount requested.

Period of Use	Population	Maximum Month:	Maximum Month Average Daily Use (gallons per capita)	Maximum Month Average Rate of Diversion (cfs)	Minimum Month:	Minimum Month Average Daily Use (gallons per capita)	Minimum Month Average Rate of Diversion (cfs)	Annual Average Daily Use (gallons per capita)	Annu Aver Rate Dive (per
Not found									

Describe method of use and provide the basis for your determination of amount of water needed.

See Attachment No. 5

Click here to include additional forecast periods to justify the amount you are requesting for municipal use. Upload the document at the bottom of the page.

☑ Power

POWER USE			
POWER FACILITY INFORMATION	**VALUE**	**POINT OF DISCHARGE TO WATERCOURSE**	**VALUE**
Power Facility Name	See Attachment No. 5	**California Coordinates (NAD'83) North**	
FERC No. (if applicable)		**California Coordinates (NAD'83) East**	
Total head to be utilized (ft)		**40-Acre Subdivision**	-Select-
Maximum Flow Through Penstock (cubic feet per second)		**Section**	-Select-
Maximum Theoretical Horsepower Capable of Being Generated by the Works		**Township Number**	-Select-
Electrical Capacity (kilowatts)		**Township Direction**	-Select-
% Efficiency		**Range Number**	-Select-
Estimated Annual Amount (acre-feet per year)		**Range Direction**	-Select-
Name of Source Where Water is Transferred After Use		**Base and Meridian**	-Select-
Nature of the works by means of which the power is to be developed		**Use to which the power is to be applied**	

Click here to include additional power facilities. Upload the document at the bottom of the page.

Describe method of use and provide the basis for your determination of the amount of water needed for power use.

See Attachment No. 5

Please indicate below whether the following statements apply to your project. This information will assist in determining your application fee and whether the project may qualify for a California Environmental Quality Act (CEQA) exemption for your project under Public Resources Code section 15328:

1. The capacity of the generating facilities 5 megawatts or less. ○ Yes ○ No

2. The operation of the generating facilities will not change the flow regime in the affected stream, canal, or pipeline, including but not limited to: (a) rate and volume of flow; (b) temperature; (c) Amounts of dissolved oxygen to a degree that could adversely affect aquatic life; and (d) timing of release. ○ Yes ○ No

3. New power lines to connect the generating facilities to existing power lines will not exceed one mile in length if located on a new right of way and will not be located adjacent to a wild or scenic river. ○ Yes ○ No

4. Repair or reconstruction of the diversion structure will not raise the normal maximum surface elevation of the impoundment. ○ Yes ○ No

5. There will be no significant upstream or downstream passage of fish affected by the project. ○ Yes ○ No

6. The discharge from the power house will not be located more than 300 feet from the toe of the diversion structure. ○ Yes ○ No

7. The project will not cause violations of applicable state of federal water quality standards. ○ Yes ○ No

8. The project will not entail any construction on or alteration of a site included in or eligible for inclusion in the National Register of Historic Places. ○ Yes ○ No

9. Construction will not occur in the vicinity of any endangered, rate or threatened species. ○ Yes ○ No

If your response to each of the above questions is "yes" refer to the fee schedule (https://www.waterboards.ca.gov/resources/fees/water_rights/) to determine the fee for an Application for Small Hydroelectric. You will enter this fee in Section 18. You may also qualify for a Class 28 CEQA exemption for Small Hydroelectric Projects at Existing Facilities (Pub. Res. Code section 15328 (https://govt.westlaw.com/calregs/Document/IE9374D90D48811DEBC02831C6D6C108E?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=(sc.Default))). Please prepare a memorandum in support of your answers to the above questions as they apply to your project and submit below.

☑ Recreational

Type of Recreation	Describe method of use and provide the basis for your determination of amount of water needed	Estimated Annual Amount (acre-feet per year)	
Not found			

☐Stockwatering

☑Water Quality

Type of Water Quality Use	Basis for Determination of Amount of Water Needed for Water Quality Use	Estimated Annual Amount (acre-feet per year)	
Not found			

If Water Quality use consists of an 'in-situ' use, please provide evidence and analysis demonstrating how the water will be put to beneficial use. This information may be contained in a Groundwater Sustainability Plan, in which case you may upload the applicable section of the plan at the bottom of the page. If your application is not part of a Groundwater Sustainability Plan, please provide supporting documentation.

☑Other Uses

The State Water Resources Control Board will determine whether the uses of water identified below are beneficial when considering the individual application (California Code of Regulations section 659 (https://govt.westlaw.com/calregs/Document/I848B7250D45A11DEA95CA4428EC25FA0?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=(sc.Default))). You should consider the overarching principal of reasonable use when developing your justification for the beneficial uses selected below.

The table below is only for Other Uses. Use the above Sections for any established beneficial uses that will be part of your project.

Type of Use	Described why the Type of Use is considered beneficial	Basis for Determination of Amount of Water Needed	Estimated Annual Amount (acre-feet per year)	
Not found				

☐Other (Special Uses for Underground Storage Projects)

(2) Identify all incidental purposes of use below.

☐Domestic
☐Municipal
☐Aquaculture
☐Heat Control

☐Irrigation
☐Mining
☐Recreation
☐Other

☐Power
☐Industrial
☐Water Quality

☐Frost Protection
☐Stockwatering
☐Fish and Wildlife Preservation and Enhancement

For each incidental use checked, provide a short justification as to why the use should be considered incidental to the primary use(s).

Included above

Please upload all requested documents here:

Choose Files Attachment 6 - Water Conservation.pdf

Upload

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Delete Attachment 5 - Justification of Amounts Requested.pdf (/MT/TakeSurvey/Download?fileName=1072_438324_84620_AppropriativeWa__Section6Upload_3.pdf)

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SECTION 7: PLACE OF USE

Section 1: Owner Information | Section 2: Agent and Consultant | Section 3: Permit Type | Section 4: Map Requirements | Section 5: Project Description | Section 6: Purpose of Use

In this section, check the applicable boxes below and complete the tables to identify the locations where the water for your project will be used. Depending on the purpose of use, the water may be used on land, at a reservoir, or in a stream channel. Items may be entered into the tables below by clicking the "+" sign, edited using the pencil icon, and deleted using the trash icon.The location information for non-consumptive uses that occur at one or more reservoirs will be requested in a subsequent question.

☑ Water will be used on land for the intended purposes of use.

Describe where water will be used in each 40-acre portion (1/16 section) of the Public Land Survey by completing the table below. The area described below should be consistent with the area of the place of use as delineated on your map. Where irrigation of very large areas is proposed, it may be sufficient to omit reference to the 40-acre subdivisions and/or sections, as practical, in your description of the general area to be irrigated in the table below (Title 23, CCR section 719).

40-Acre Subdivision	Section Number	Projected (Y/N)	Township Number	Township Direction	Range Number	Range Direction	Base and Meridian	Number of Acres	Presently Cultivated
NE1/4 of SE1/4	17	Yes	3	S	14	E	MD		No
NW1/4 of SW1/4	16	Yes	3	S	14	E	MD		No
SW1/4 of SW1/4	3	Yes	3	S	14	E	MD		No
SE1/4 of NE1/4	3	Yes	4	S	10	E	MD		No
SW1/4 of NW1/4	2	Yes	4	S	10	E	MD		No

Total Acres:

Calculate Total Acres

Provide a narrative description of your place of use.

See Attachment No. 3

SECTION 7: PLACE OF USE

Section 1: Owner Information

Section 2: Agent and Consultant

Section 3: Permit Type

Section 4: Map Requirements

Section 5: Project Description

Section 6: Purpose of Use

In this section, check the applicable boxes below and complete the tables to identify the locations where the water for your project will be used. Depending on the purpose of use, the water may be used on land, at a reservoir, or in a stream channel. Items may be entered into the tables below by clicking the "+" sign, edited using the pencil icon, and deleted using the trash icon.The location information for non-consumptive uses that occur at one or more reservoirs will be requested in a subsequent question.

☑ Water will be used on land for the intended purposes of use.

Describe where water will be used in each 40-acre portion (1/16 section) of the Public Land Survey by completing the table below. The area described below should be consistent with the area of the place of use as delineated on your map. Where irrigation of very large areas is proposed, it may be sufficient to omit reference to the 40-acre subdivisions and/or sections, as practical, in your description of the general area to be irrigated in the table below (Title 23, CCR section 719 (https://govt.westlaw.com/calregs/Document/I9B368440D45A11DEA95CA4428EC25FA0?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=(sc.Default))).

40-Acre Subdivision	Section Number	Projected (Y/N)	Township Number	Township Direction	Range Number	Range Direction
NE1/4 of SE1/4	17	Yes	3	S	14	E

NW1/4 of SW1/4	16	Yes	3	S	14	E
SW1/4 of SW1/4	3	Yes	3	S	14	E
SE1/4 of NE1/4	3	Yes	4	S	10	E

Total Acres:

Calculate Total Acres

Provide a narrative description of your place of use.

See Attachment No. 3

If your project involves multiple diversion points serving different portions of your place of use, please upload a place of use map to establish a naming convention for the different place of use portions. This naming convention will be used in later section of this application.

Choose Files No file chosen

Upload

(Uploaded files:)
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Delete Exhibit A to Attachment 3.pdf (/MT/TakeSurvey/Download?fileName=1072_438324_69273_AppropriativeWa__WaterLandUpload_2.pdf)
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☐ Water will be placed in a stream channel for the intended purposes of use.

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SECTION 8: POINT LOCATIONS

Section 1: Owner Information | Section 2: Agent and Consultant | Section 3: Permit Type | Section 4: Map Requirements | Section 5: Project Description | Section 6: Purpose of Use | Section 7: Place of Use

In this section, you will provide information regarding the points where you intend to exercise control of and/or store water. You must provide the correct latitude and longitude coordinates for your point locations before proceeding to the next section. Use of other coordinate systems (such as California Coordinate System) will not be accepted. Enter the points in the order that you would like them to be arranged in your application, with the primary point (if one exists) being identified first and any offstream storage facilities last. Items may be entered into the tables below by clicking the "+" sign, edited using the pencil icon, and deleted using the trash icon. An optional point name may also be entered for each point designated to allow accurate identification of your points in the coming sections. Click the "Next" button after you have entered the locations of all points.

Your point locations will be screened based on geographic location with respect to Fully Appropriated Streams, Wild and Scenic Rivers, and the Policy for Maintaining Instream Flows in Northern California Coastal Streams.

A descriptive point name can be provided for each point location. Please ensure that the point name is consistent with the naming convention used in your project map. Examples include frog reservoir, offset well 3, instream pump, etc.

Please enter the latitude and longitude of your point location in the table below:

Latitude	Longitude	Point Name (optional)
37.7005423113	-120.4215702939	Don Pedro Dam
37.6721950654	-120.4443303304	La Grange Diversion Dam
37.6174943629	-120.8473779869	Tuolumne River Infiltration Galleries
37.970834	-120.522036	New Melones
37.651146	-120.399583	Cardoza Ridge
37.569434	-120.424758	Montgomery Reservoir
37.603069	-120.621173	Dickenson
37.724363	-120.597797	Upper Cooperstown
37.709663	-120.703592	Lower Cooperstown
37.642439	-120.630010	Roberts Ferry

SECTION 8.1: POINT LOCATIONS MAP

Section 1: Owner Information | Section 2: Agent and Consultant | Section 3: Permit Type | Section 4: Map Requirements | Section 5: Project Description | Section 6: Purpose of Use | Section 7: Place of Use

Click the Point Location Mapping button below to view and confirm the locations you provided above. If any errors are found, please return to the previous page and make the appropriate corrections. If the information is correct, please click Next.

SECTION 9.1: FULLY APPROPRIATED STREAMS SCREENING RESULTS

Section 1: Owner Information

Section 2: Agent and Consultant

Section 3: Permit Type

Section 4: Map Requirements

Section 5: Project Description

Section 6: Purpose of Use

Section 7: Place of Use

Section 8: Point Locations

On November 19, 1998, the State Water Resources Control Board, acting pursuant to Water Code section 1205 et seq., adopted the current Declaration of Fully Appropriated Streams (Declaration) with State Water Board Order 98-08. Water Code section 1206, subdivision (a), provides that, following the adoption of a Declaration, the State Water Resources Control Board shall not accept for filing any application for a permit to appropriate water from that system. Stream sources associated with the locations identified in Section 8 have been automatically screened and identified as located within a stream system that is fully appropriated for either a portion of the year or the entire year using GIS mapping resources. While there may be multiple decisions identified for each point below, the most restrictive components of those decisions will be provided in the FAS season columns. This screening is not definitive and is provided for informational purposes only. Division staff will conduct a manual review of each point as part of the application review process. Sources and the associated season that is not prohibited by the declaration of fully appropriated streams are identified in the table below:

Point Name	This point location is located within a FAS area	FAS Decision(s)	FAS Season	
			Season Start	Season End

La Grange Diversion Dam	True	Tuolumne 0995	7/1	10/31
Tuolumne River Infiltration Galleries	False			
Don Pedro Dam	True	Tuolumne 0995	7/1	10/31
New Melones	True	San Joaquin / Stanislaus / Tuolumne 0000 / Stanislaus 0000 San Joaquin 1422	4/1	11/30
Lower Cooperstown	False			
Upper Cooperstown	False			
Cardoza Ridge	True	Tuolumne 0995	7/1	10/31
Montgomery Reservoir	True	Mariposa / Merced 0650 / Tuolumne 0995	4/1	10/31
Dickenson	False			
Roberts Ferry	False			

While an application that is filed for a project located on the stream system identified above may not be accepted, there are several exceptions. ℹ️ The State Water Resources Control Board, upon its own motion, may adopt an order revoking the fully appropriated streams status or revise any condition specified in a declaration upon which applications to appropriate water will be accepted for filing will be accepted. Any decision to adopt an order will be based on a change in circumstances from those considered in a previous water right decision determining that no water remains available, or upon reasonable cause derived from hydrologic data, water usage data, or other relevant information acquired. In addition, any person may petition the State Water Resources Control Board to revoke or revise the fully appropriated streams status. The petition shall include the appropriate fees (https://www.waterboards.ca.gov/resources/fees/water_rights/#cur_info) and hydrologic data, water usage data, or other relevant information that reasonable cause exists to conduct a hearing on the question whether the fully appropriated status of the stream system should be revoked or revised.

If you would like additional information, you may contact the appropriate staff from the Permitting Section (https://www.waterboards.ca.gov/waterrights/water_issues/programs/applications/#contacts).

- [x] I affirm that if I select a season of diversion that is within the season identified above my application may not be accepted for filing.

- [x] I understand that because my project may be located in a fully appropriated streams system, my application will be subject to additional review.

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SECTION 10: POINT AND FACILITIES INFORMATION

In this section, you will provide the basic information related to the point locations you identified in Section 8. For each point location identified, provide the requested information below. Once complete, you can move to the next point location by clicking the "Next Point" button near the bottom of this section. The navigation tools will allow you to move readily between points. Once all the information requested below has been provided for each point, please click "Submit" and you will move to Section 11. If you would like to review your point location map, click on "Previous" at the bottom of the page. If you would like to add, delete, or make edits to your point location, click on "Section 8: Point Locations".

Point 1 of 10.
Point Name: La Grange Diversion Dam

Point Location Details

Based on the latitude and longitude provided in Section 8 for this point, we have identified the following attributes related to the location of this point. Please answer the remaining items in the table.

POINT LOCATION

ATTRIBUTE	VALUE	ATTRIBUTE	VALUE
Latitude	37.6721950654	**Longitude**	-120.4443303304
Parcel No.		**1/4 of 1/4 Section**	-Select-
County	Stanislaus	**1/4 Section**	-Select-
California Coordinates Zone (NAD '83)	3	**Section**	17
California Coordinates North (NAD '83)	2067229	**Township and Direction**	03 S
California Coordinates East (NAD '83)	6577779	**Range and Direction**	14 E
Base and Meridian	M	**Name of Water Source at Point**	
Water Source is Tributary to		**Thence:**	
Thence:		**Thence:**	

What is the purpose of use for the diversion from this point? On what type of place of use will the diverted water for this purpose be used?

PLACE AND PURPOSE OF USE DETAILS	
Purpose of Use	**Place of use (Ex. Crop Blocks, Reservoir, Channel)**
See Attachment Nos. 2 & 3	

Type of Diversion and Amount Diverted at this Point

The series of questions below is designed to determine the type of diversion occurring at this point. Please review and answer all questions. If your answer is "yes" to the first question, you can skip the remaining questions.

Within this section you will also be asked to identify the total amount of water diverted and season of diversion/collection at this point.

(1) Are you proposing that this point be designated as a location of an offstream storage facility? ○ Yes ◉ No

(2) Answer the following general questions about this point:

(2a) Are you proposing to divert water by means of an onstream dam at this point? ◉ Yes ○ No

(2b) Are you proposing to redivert water that has previously been diverted at another point identified in this application?

○ Yes ◉ No

(3) Are you proposing to divert water by direct diversion from this point? ◉ Yes ○ No

Point Type: Direct Diversion

Provide the total amount requested to be directly diverted from this point and the season of diversion.

DIRECT DIVERSION: RATE, AMOUNT AND SEASON				
ATTRIBUTE	**VALUE**	**ATTRIBUTE**	**VALUE**	
Maximum Rate of Diversion (cubic feet per second)		**Maximum Annual Amount of Diversion (acre-feet/year)**		
Season of Diversion Beginning Date		**Season of Diversion Ending Date**		

Provide information regarding the diversion facility and method of diversion for this point.

DIVERSION FACILITY AND METHOD OF DIVERSION						
Does this point divert by gravity?	**Describe the gravity diversion method**	**Does this point divert by Pumping?**	**Diversion will be by pumping from:**	**Pump Discharge Rate (cubic feet per second)**	**Pump Horsepower**	**Pump Efficiency (%)**

If another method other than gravity diversion and diversion by pumping is used, describe:

See Attachment No. 2 for above information

(4) Are you proposing to collect water in an aboveground storage facility that is located at this point? ○ Yes ◉ No

(5) Are you proposing to divert water from this point to an aboveground storage facility that is not located at this point? ◉ Yes ○ No

Point Type: Diversion to Offstream Storage

Provide the total amount of water to be diverted to storage at another facility at this point and the season of diversion:

POINT OF DIVERSION TO OFFSTREAM STORAGE: RATE, AMOUNT AND SEASON					
ATTRIBUTE	VALUE		ATTRIBUTE	VALUE	
Maximum Rate of Diversion (cubic feet per second)			Maximum Annual Amount of Water (acre-feet)		
Season of Diversion Beginning Date			Season of Diversion Ending Date		

Provide the following details for the reservoir.

RESERVOIR DETAILS						
Status	Capacity (acre-feet)	Maximum Water Depth (feet)	Surface Area when Full (acres)	Reservoir Enlargement Proposed?	Is Reservoir within Division of Safety of Dams Jurisdiction?	Division of Safety of Dams Number

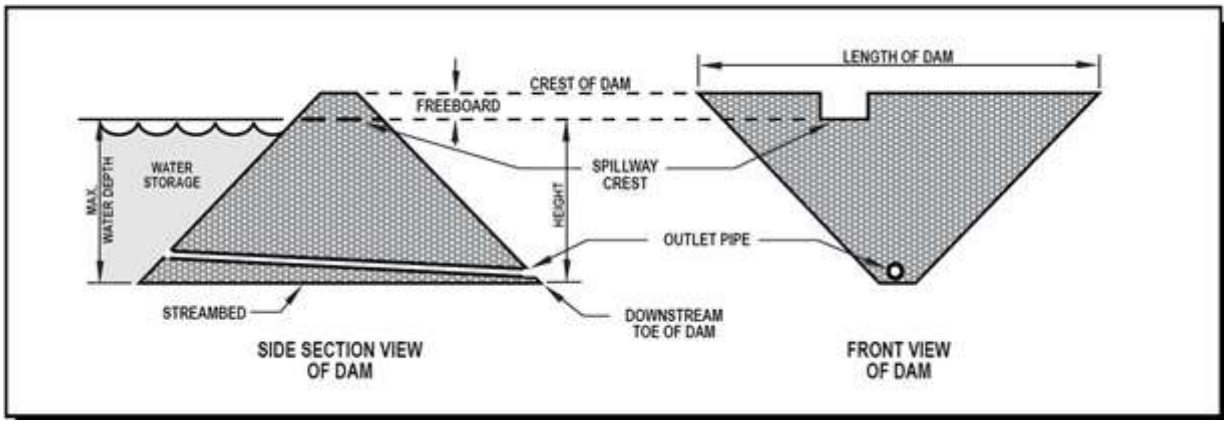
If the status of a reservoir listed above is "partially existing", please provide a description of the existing dam components relative to what is being requested in the application:

See Attachment Nos. 2 & 3 for above information

If the water will be used at the reservoir for the intended purpose of use , please identify the location of the reservoir in each 40-acre portion (1/16 section) of the Public Land Survey by completing the table below. The location of the maximum reservoir surface area (at spillway level) therefore should be identified in relation to 1/4 - 1/4 sections.

PLACE OF USE AT RESERVOIR							
40-Acre Subdivision	Section Number	Projected (Y/N)	Township Number	Township Direction	Range Number	Range Direction	Base and Meridian

Provide the dam information at this point's aboveground storage. A diagram for reference is provided below for your reference.



DAM INFORMATION						
Point Number	**Point Name**	**Status**	**Construction Material**	**Length (feet)**	**Freeboard (feet)**	**Height (feet)**

*Other, Construction Material:

If the status of a dam listed above is "partially existing", please provide a description of the existing dam components relative to what is being requested in the application:

See Attachment Nos. 2 & 3

Provide information regarding any outlet pipes for the reservoir.

OUTLET PIPE DETAILS						
Existing or Proposed	**Outlet Pipe Material**	**Diameter (inches)**	**Length (feet)**	**Fall (feet)**	**Head (feet)**	**Dead Storage (acre-feet)**

*Other Outlet Pipe Material, describe:

See Attachment Nos. 2 & 3

(6) Are you proposing to divert water from this point to an underground storage facility? ◉ Yes ○ No

Point Type: Diversion to Underground Storage

Provide the amount of water to be diverted to an underground storage facility and the season of diversion.

DIVERSION TO UNDERGROUND STORAGE: RATE, AMOUNT, AND SEASON				
ATTRIBUTE	**VALUE**		**ATTRIBUTE**	**VALUE**
Maximum Rate of Diversion (cubic feet per second)			**Maximum Annual Amount of Water (acre-feet)**	
Season of Diversion Beginning Date			**Season of Diversion Ending Date**	

The navigation buttons below can be used to navigate between your points. Once you have entered in all the information requested above for each of your points, please click the "next" button to proceed to the next section. If you would like to view your point location map, click on "Previous" at the bottom of the page. If you would like to add, delete, or make edits to your point location, click on "Section 8: Point Locations" at the top of the page to navigate back to the point location list.

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SECTION 10: POINT AND FACILITIES INFORMATION

In this section, you will provide the basic information related to the point locations you identified in Section 8. For each point location identified, provide the requested information below. Once complete, you can move to the next point location by clicking the "Next Point" button near the bottom of this section. The navigation tools will allow you to move readily between points. Once all the information requested below has been provided for each point, please click "Submit" and you will move to Section 11. If you would like to review your point location map, click on "Previous" at the bottom of the page. If you would like to add, delete, or make edits to your point location, click on "Section 8: Point Locations".

Point 2 of 10.
Point Name: Tuolumne River Infiltration Galleries

Point Location Details

Based on the latitude and longitude provided in Section 8 for this point, we have identified the following attributes related to the location of this point. Please answer the remaining items in the table.

POINT LOCATION

ATTRIBUTE	VALUE	ATTRIBUTE	VALUE
Latitude	37.6174943629	**Longitude**	-120.8473779869
Parcel No.	018003006	**1/4 of 1/4 Section**	-Select-
County	Stanislaus	**1/4 Section**	-Select-
California Coordinates Zone (NAD '83)	3	**Section**	02
California Coordinates North (NAD '83)	2047493	**Township and Direction**	04 S
California Coordinates East (NAD '83)	6461054	**Range and Direction**	10 E
Base and Meridian	M	**Name of Water Source at Point**	
Water Source is Tributary to		**Thence:**	
Thence:		**Thence:**	

What is the purpose of use for the diversion from this point? On what type of place of use will the diverted water for this purpose be used?

PLACE AND PURPOSE OF USE DETAILS	
Purpose of Use	**Place of use (Ex. Crop Blocks, Reservoir, Channel)**
See Attachment Nos. 2 & 3	

Type of Diversion and Amount Diverted at this Point

The series of questions below is designed to determine the type of diversion occurring at this point. Please review and answer all questions. If your answer is "yes" to the first question, you can skip the remaining questions.

Within this section you will also be asked to identify the total amount of water diverted and season of diversion/collection at this point.

(1) Are you proposing that this point be designated as a location of an offstream storage facility? ○ Yes ◉ No

(2) Answer the following general questions about this point:

(2a) Are you proposing to divert water by means of an onstream dam at this point? ○ Yes ◉ No

(2b) Are you proposing to redivert water that has previously been diverted at another point identified in this application?

○ Yes ◉ No

(3) Are you proposing to divert water by direct diversion from this point? ◉ Yes ○ No

Point Type: Direct Diversion

Provide the total amount requested to be directly diverted from this point and the season of diversion.

DIRECT DIVERSION: RATE, AMOUNT AND SEASON				
ATTRIBUTE	**VALUE**	**ATTRIBUTE**	**VALUE**	
Maximum Rate of Diversion (cubic feet per second)		**Maximum Annual Amount of Diversion (acre-feet/year)**		
Season of Diversion Beginning Date		**Season of Diversion Ending Date**		

Provide information regarding the diversion facility and method of diversion for this point.

DIVERSION FACILITY AND METHOD OF DIVERSION						
Does this point divert by gravity?	**Describe the gravity diversion method**	**Does this point divert by Pumping?**	**Diversion will be by pumping from:**	**Pump Discharge Rate (cubic feet per second)**	**Pump Horsepower**	**Pump Efficiency (%)**

If another method other than gravity diversion and diversion by pumping is used, describe:

See Attachment Nos. 2 & 3 for above information

(4) Are you proposing to collect water in an aboveground storage facility that is located at this point? ○ Yes ◉ No

(5) Are you proposing to divert water from this point to an aboveground storage facility that is not located at this point? ○ Yes ◉ No

(6) Are you proposing to divert water from this point to an underground storage facility? ◉ Yes ○ No

Point Type: Diversion to Underground Storage

Provide the amount of water to be diverted to an underground storage facility and the season of diversion.

DIVERSION TO UNDERGROUND STORAGE: RATE, AMOUNT, AND SEASON				
ATTRIBUTE	**VALUE**		**ATTRIBUTE**	**VALUE**
Maximum Rate of Diversion (cubic feet per second)			**Maximum Annual Amount of Water (acre-feet)**	
Season of Diversion Beginning Date			**Season of Diversion Ending Date**	

The navigation buttons below can be used to navigate between your points. Once you have entered in all the information requested above for each of your points, please click the "next" button to proceed to the next section. If you would like to view your point location map, click on "Previous" at the bottom of the page. If you would like to add, delete, or make edits to your point location, click on "Section 8: Point Locations" at the top of the page to navigate back to the point location list.

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SECTION 10: POINT AND FACILITIES INFORMATION

In this section, you will provide the basic information related to the point locations you identified in Section 8. For each point location identified, provide the requested information below. Once complete, you can move to the next point location by clicking the "Next Point" button near the bottom of this section. The navigation tools will allow you to move readily between points. Once all the information requested below has been provided for each point, please click "Submit" and you will move to Section 11. If you would like to review your point location map, click on "Previous" at the bottom of the page. If you would like to add, delete, or make edits to your point location, click on "Section 8: Point Locations".

Point 3 of 10.
Point Name: Don Pedro Dam

Point Location Details

Based on the latitude and longitude provided in Section 8 for this point, we have identified the following attributes related to the location of this point. Please answer the remaining items in the table.

POINT LOCATION

ATTRIBUTE	VALUE	ATTRIBUTE	VALUE
Latitude	37.7005423113	**Longitude**	-120.4215702939
Parcel No.	071-140-002	**1/4 of 1/4 Section**	-Select-
County	Tuolumne	**1/4 Section**	-Select-
California Coordinates Zone (NAD '83)	3	**Section**	03
California Coordinates North (NAD '83)	2077555	**Township and Direction**	03 S
California Coordinates East (NAD '83)	6584357	**Range and Direction**	14 E
Base and Meridian	M	**Name of Water Source at Point**	
Water Source is Tributary to		**Thence:**	
Thence:		**Thence:**	

What is the purpose of use for the diversion from this point? On what type of place of use will the diverted water for this purpose be used?

PLACE AND PURPOSE OF USE DETAILS	
Purpose of Use	**Place of use (Ex. Crop Blocks, Reservoir, Channel)**
See Attachment Nos. 2 & 3	

Type of Diversion and Amount Diverted at this Point

The series of questions below is designed to determine the type of diversion occurring at this point. Please review and answer all questions. If your answer is "yes" to the first question, you can skip the remaining questions.

Within this section you will also be asked to identify the total amount of water diverted and season of diversion/collection at this point.

(1) Are you proposing that this point be designated as a location of an offstream storage facility? ○ Yes ◉ No

(2) Answer the following general questions about this point:

(2a) Are you proposing to divert water by means of an onstream dam at this point? ◉ Yes ○ No

(2b) Are you proposing to redivert water that has previously been diverted at another point identified in this application?

○ Yes ◉ No

(3) Are you proposing to divert water by direct diversion from this point? ◉ Yes ○ No

Point Type: Direct Diversion

Provide the total amount requested to be directly diverted from this point and the season of diversion.

DIRECT DIVERSION: RATE, AMOUNT AND SEASON				
ATTRIBUTE	**VALUE**		**ATTRIBUTE**	**VALUE**
Maximum Rate of Diversion (cubic feet per second)			**Maximum Annual Amount of Diversion (acre-feet/year)**	
Season of Diversion Beginning Date			**Season of Diversion Ending Date**	

Provide information regarding the diversion facility and method of diversion for this point.

DIVERSION FACILITY AND METHOD OF DIVERSION						
Does this point divert by gravity?	**Describe the gravity diversion method**	**Does this point divert by Pumping?**	**Diversion will be by pumping from:**	**Pump Discharge Rate (cubic feet per second)**	**Pump Horsepower**	**Pump Efficiency (%)**

If another method other than gravity diversion and diversion by pumping is used, describe:

See Attachment Nos. 2 & 3 for above information

(4) Are you proposing to collect water in an aboveground storage facility that is located at this point? ◉ Yes

○ No

Point Type: Onstream Storage

Provide the total amount of water requested to be stored at this point and the season of collection.

STORAGE: AMOUNT AND SEASON			
ATTRIBUTE	**VALUE**	**ATTRIBUTE**	**VALUE**

Maximum Annual Amount of Water (acre-feet)		**Season of Diversion Beginning Date**		
		Season of Diversion Ending Date		

Provide the following details for the reservoir.

RESERVOIR DETAILS						
Status	**Capacity (acre-feet)**	**Maximum Water Depth (feet)**	**Surface Area when Full (acres)**	**Reservoir Enlargement Proposed?**	**Is Reservoir within Division of Safety of Dams Jurisdiction?**	**Division of Safety of Dams Number**

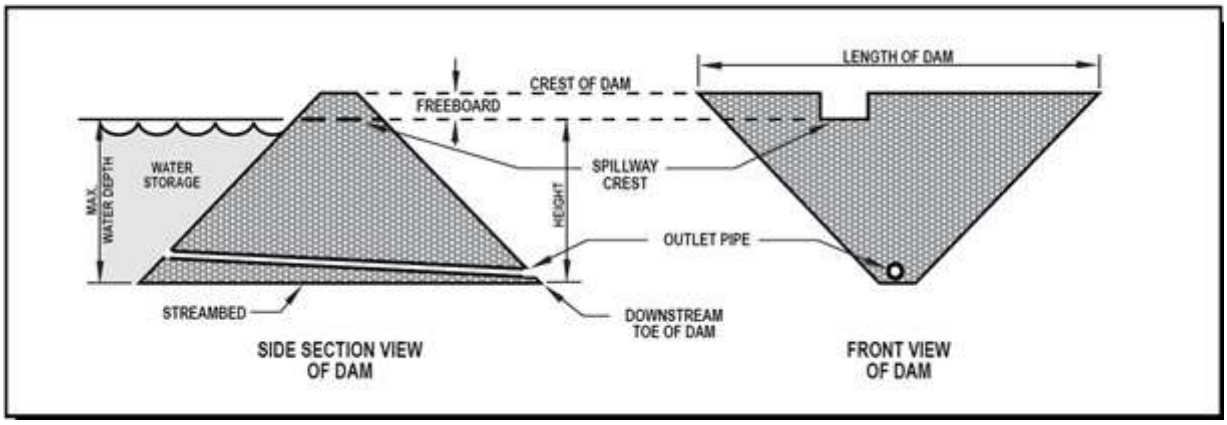
If the status of a reservoir listed above is "partially existing", please provide a description of the existing dam components relative to what is being requested in the application:

See Attachment Nos. 2 & 3 for above information

If the water will be used at the reservoir for the intended purpose of use, please identify the location of the reservoir in each 40-acre portion (1/16 section) of the Public Land Survey by completing the table below. The location of the maximum reservoir surface area (at spillway level) therefore should be identified in relation to 1/4 - 1/4 sections.

PLACE OF USE AT RESERVOIR							
40-Acre Subdivision	**Section Number**	**Projected (Y/N)**	**Township Number**	**Township Direction**	**Range Number**	**Range Direction**	**Base and Meridian**

Provide information for each dam included in this application. Prove the dam information at this point's aboveground storage. A diagram is provided below for your reference.



DAM INFORMATION						
Point Number	**Point Name**	**Status**	**Construction Material**	**Length (feet)**	**Freeboard (feet)**	**Height (feet)**

*Other, Construction Material:

If the status of a dam listed above is "partially existing", please provide a description of the existing dam components relative to what is being requested in the application:

See Attachment Nos. 2 & 3 for above information

Provide information regarding any outlet pipes for the reservoir.

OUTLET PIPE DETAILS						
Existing or Proposed	**Outlet Pipe Material**	**Diameter (inches)**	**Length (feet)**	**Fall (feet)**	**Head (feet)**	**Dead Storage (acre-feet)**

*Other Outlet Pipe Material, describe:

See Attachment Nos. 2 & 3 for above information

(5) Are you proposing to divert water from this point to an aboveground storage facility that is not located at this point?

◉ Yes ○ No

Point Type: Diversion to Offstream Storage

Provide the total amount of water to be diverted to storage at another facility at this point and the season of diversion:

POINT OF DIVERSION TO OFFSTREAM STORAGE: RATE, AMOUNT AND SEASON				
ATTRIBUTE	**VALUE**	**ATTRIBUTE**	**VALUE**	
Maximum Rate of Diversion (cubic feet per second)		**Maximum Annual Amount of Water (acre-feet)**		
Season of Diversion Beginning Date		**Season of Diversion Ending Date**		

Provide the following details for the reservoir.

RESERVOIR DETAILS						
Status	**Capacity (acre-feet)**	**Maximum Water Depth (feet)**	**Surface Area when Full (acres)**	**Reservoir Enlargement Proposed?**	**Is Reservoir within Division of Safety of Dams Jurisdiction?**	**Division of Safety of Dams Number**

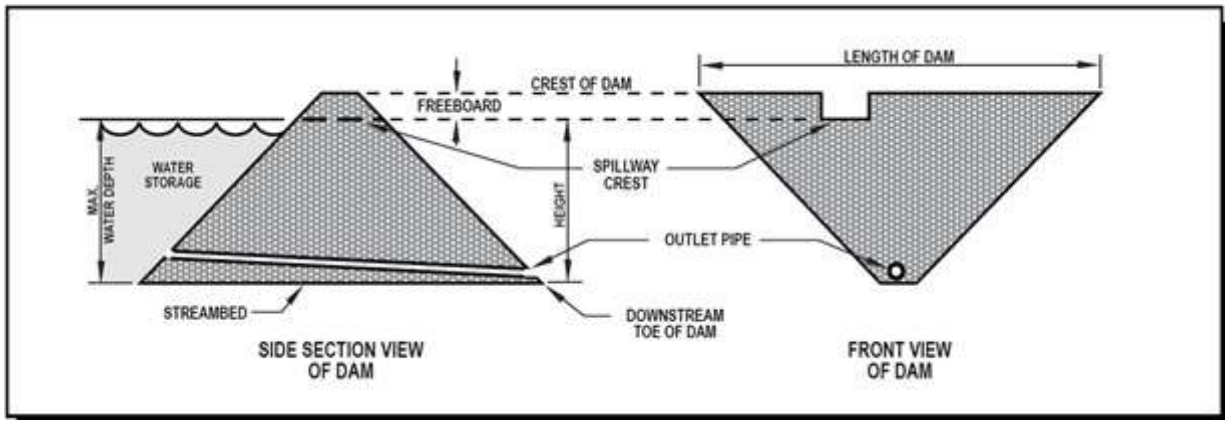
If the status of a reservoir listed above is "partially existing", please provide a description of the existing dam components relative to what is being requested in the application:

See Attachment Nos. 2 & 3 for above information

If the water will be used at the reservoir for the intended purpose of use , please identify the location of the reservoir in each 40-acre portion (1/16 section) of the Public Land Survey by completing the table below. The location of the maximum reservoir surface area (at spillway level) therefore should be identified in relation to 1/4 - 1/4 sections.

PLACE OF USE AT RESERVOIR							
40-Acre Subdivision	Section Number	Projected (Y/N)	Township Number	Township Direction	Range Number	Range Direction	Base and Meridian

Provide the dam information at this point's aboveground storage. A diagram for reference is provided below for your reference.



DAM INFORMATION						
Point Number	Point Name	Status	Construction Material	Length (feet)	Freeboard (feet)	Height (feet)

*Other, Construction Material:

If the status of a dam listed above is "partially existing", please provide a description of the existing dam components relative to what is being requested in the application:

See Attachment Nos. 2 & 3 for above information

Provide information regarding any outlet pipes for the reservoir.

OUTLET PIPE DETAILS						
Existing or Proposed	Outlet Pipe Material	Diameter (inches)	Length (feet)	Fall (feet)	Head (feet)	Dead Storage (acre-feet)

*Other Outlet Pipe Material, describe:

See Attachment Nos. 2 & 3 for above information

(6) Are you proposing to divert water from this point to an underground storage facility? ◉ Yes ○ No

Point Type: Diversion to Underground Storage

Provide the amount of water to be diverted to an underground storage facility and the season of diversion.

DIVERSION TO UNDERGROUND STORAGE: RATE, AMOUNT, AND SEASON				
ATTRIBUTE	VALUE		ATTRIBUTE	VALUE
Maximum Rate of Diversion (cubic feet per second)			Maximum Annual Amount of Water (acre-feet)	
Season of Diversion Beginning Date			Season of Diversion Ending Date	

The navigation buttons below can be used to navigate between your points. Once you have entered in all the information requested above for each of your points, please click the "next" button to proceed to the next section. If you would like to view your point location map, click on "Previous" at the bottom of the page. If you would like to add, delete, or make edits to your point location, click on "Section 8: Point Locations" at the top of the page to navigate back to the point location list.

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Point 4 of 10.
Point Name: New Melones

Point Location Details

Based on the latitude and longitude provided in Section 8 for this point, we have identified the following attributes related to the location of this point. Please answer the remaining items in the table.

POINT LOCATION

ATTRIBUTE	VALUE	ATTRIBUTE	VALUE
Latitude	37.970834	**Longitude**	-120.522036
Parcel No.	063-050-014	**1/4 of 1/4 Section**	-Select-
County	Tuolumne	**1/4 Section**	-Select-
California Coordinates Zone (NAD '83)	3	**Section**	02
California Coordinates North (NAD '83)	2175966	**Township and Direction**	01 N
California Coordinates East (NAD '83)	6555315	**Range and Direction**	13 E
Base and Meridian	M	**Name of Water Source at Point**	
Water Source is Tributary to		**Thence:**	
Thence:		**Thence:**	

What is the purpose of use for the diversion from this point? On what type of place of use will the diverted water for this purpose be used?

PLACE AND PURPOSE OF USE DETAILS	
Purpose of Use	**Place of use (Ex. Crop Blocks, Reservoir, Channel)**
See Attachment Nos. 2 & 3	

Type of Diversion and Amount Diverted at this Point

The series of questions below is designed to determine the type of diversion occurring at this point. Please review and answer all questions. If your answer is "yes" to the first question, you can skip the remaining questions.

Within this section you will also be asked to identify the total amount of water diverted and season of diversion/collection at this point.

(1) Are you proposing that this point be designated as a location of an offstream storage facility? ◉ Yes ○ No

Point Type: Offstream Storage

By designating this point as an offstream storage facility, you are declaring that the point is not located on a stream channel. Offstream storage facility points are not points of diversion, therefore you should not answer the remaining questions for this point. Please skip to the bottom of this page and select "Next" to move to the next page of the form.

(2) Answer the following general questions about this point:

(2a) Are you proposing to divert water by means of an onstream dam at this point? ○ Yes ◉ No

(2b) Are you proposing to redivert water that has previously been diverted at another point identified in this application? ○ Yes ◉ No

(3) Are you proposing to divert water by direct diversion from this point? ○ Yes ○ No

(4) Are you proposing to collect water in an aboveground storage facility that is located at this point? ○ Yes ○ No

(5) Are you proposing to divert water from this point to an aboveground storage facility that is not located at this point? ○ Yes ○ No

(6) Are you proposing to divert water from this point to an underground storage facility? ○ Yes ○ No

The navigation buttons below can be used to navigate between your points. Once you have entered in all the information requested above for each of your points, please click the "next" button to proceed to the next section. If you would like to view your point location map, click on "Previous" at the bottom of the page. If you would like to add, delete, or make edits to your point location, click on "Section 8: Point Locations" at the top of the page to navigate back to the point location list.

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SECTION 10: POINT AND FACILITIES INFORMATION

In this section, you will provide the basic information related to the point locations you identified in Section 8. For each point location identified, provide the requested information below. Once complete, you can move to the next point location by clicking the "Next Point" button near the bottom of this section. The navigation tools will allow you to move readily between points. Once all the information requested below has been provided for each point, please click "Submit" and you will move to Section 11. If you would like to review your point location map, click on "Previous" at the bottom of the page. If you would like to add, delete, or make edits to your point location, click on "Section 8: Point Locations".

Point 5 of 10.
Point Name: Lower Cooperstown

Point Location Details

Based on the latitude and longitude provided in Section 8 for this point, we have identified the following attributes related to the location of this point. Please answer the remaining items in the table.

POINT LOCATION

ATTRIBUTE	VALUE	ATTRIBUTE	VALUE
Latitude	37.709663	**Longitude**	-120.703592
Parcel No.	015002014	**1/4 of 1/4 Section**	-Select-
County	Stanislaus	**1/4 Section**	-Select-
California Coordinates Zone (NAD '83)	3	**Section**	01
California Coordinates North (NAD '83)	2080931	**Township and Direction**	03 S
California Coordinates East (NAD '83)	6502773	**Range and Direction**	11 E
Base and Meridian	M	**Name of Water Source at Point**	
Water Source is Tributary to		**Thence:**	
Thence:		**Thence:**	

What is the purpose of use for the diversion from this point? On what type of place of use will the diverted water for this purpose be used?

PLACE AND PURPOSE OF USE DETAILS	
Purpose of Use	**Place of use (Ex. Crop Blocks, Reservoir, Channel)**
See Attachment Nos. 2 & 3	

Type of Diversion and Amount Diverted at this Point

The series of questions below is designed to determine the type of diversion occurring at this point. Please review and answer all questions. If your answer is "yes" to the first question, you can skip the remaining questions.

Within this section you will also be asked to identify the total amount of water diverted and season of diversion/collection at this point.

(1) Are you proposing that this point be designated as a location of an offstream storage facility? ◉ Yes ○ No

Point Type: Offstream Storage

By designating this point as an offstream storage facility, you are declaring that the point is not located on a stream channel. Offstream storage facility points are not points of diversion, therefore you should not answer the remaining questions for this point. Please skip to the bottom of this page and select "Next" to move to the next page of the form.

(2) Answer the following general questions about this point:

(2a) Are you proposing to divert water by means of an onstream dam at this point? ○ Yes ○ No

(2b) Are you proposing to redivert water that has previously been diverted at another point identified in this application?

○ Yes ○ No

(3) Are you proposing to divert water by direct diversion from this point? ○ Yes ○ No

(4) Are you proposing to collect water in an aboveground storage facility that is located at this point? ○ Yes

○ No

(5) Are you proposing to divert water from this point to an aboveground storage facility that is not located at this point?

○ Yes ○ No

(6) Are you proposing to divert water from this point to an underground storage facility? ○ Yes ○ No

The navigation buttons below can be used to navigate between your points. Once you have entered in all the information requested above for each of your points, please click the "next" button to proceed to the next section. If you would like to view your point location map, click on "Previous" at the bottom of the page. If you would like to add, delete, or make edits to your point location, click on "Section 8: Point Locations" at the top of the page to navigate back to the point location list.

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SECTION 10: POINT AND FACILITIES INFORMATION

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Point 6 of 10.
Point Name: Upper Cooperstown

Point Location Details

Based on the latitude and longitude provided in Section 8 for this point, we have identified the following attributes related to the location of this point. Please answer the remaining items in the table.

POINT LOCATION

ATTRIBUTE	VALUE	ATTRIBUTE	VALUE
Latitude	37.724363	**Longitude**	-120.597797
Parcel No.	011006038	**1/4 of 1/4 Section**	-Select-
County	Stanislaus	**1/4 Section**	-Select-
California Coordinates Zone (NAD '83)	3	**Section**	36
California Coordinates North (NAD '83)	2086234	**Township and Direction**	02 S
California Coordinates East (NAD '83)	6533382	**Range and Direction**	12 E
Base and Meridian	M	**Name of Water Source at Point**	
Water Source is Tributary to		**Thence:**	
Thence:		**Thence:**	

What is the purpose of use for the diversion from this point? On what type of place of use will the diverted water for this purpose be used?

PLACE AND PURPOSE OF USE DETAILS	
Purpose of Use	**Place of use (Ex. Crop Blocks, Reservoir, Channel)**
See Attachment Nos. 2 & 3	

Type of Diversion and Amount Diverted at this Point

The series of questions below is designed to determine the type of diversion occurring at this point. Please review and answer all questions. If your answer is "yes" to the first question, you can skip the remaining questions.

Within this section you will also be asked to identify the total amount of water diverted and season of diversion/collection at this point.

(1) Are you proposing that this point be designated as a location of an offstream storage facility? ◉ Yes ○ No

Point Type: Offstream Storage

By designating this point as an offstream storage facility, you are declaring that the point is not located on a stream channel. Offstream storage facility points are not points of diversion, therefore you should not answer the remaining questions for this point. Please skip to the bottom of this page and select "Next" to move to the next page of the form.

(2) Answer the following general questions about this point:

(2a) Are you proposing to divert water by means of an onstream dam at this point? ○ Yes ○ No

(2b) Are you proposing to redivert water that has previously been diverted at another point identified in this application?

○ Yes ○ No

(3) Are you proposing to divert water by direct diversion from this point? ○ Yes ○ No

(4) Are you proposing to collect water in an aboveground storage facility that is located at this point? ○ Yes

○ No

(5) Are you proposing to divert water from this point to an aboveground storage facility that is not located at this point?

○ Yes ○ No

(6) Are you proposing to divert water from this point to an underground storage facility? ○ Yes ○ No

The navigation buttons below can be used to navigate between your points. Once you have entered in all the information requested above for each of your points, please click the "next" button to proceed to the next section. If you would like to view your point location map, click on "Previous" at the bottom of the page. If you would like to add, delete, or make edits to your point location, click on "Section 8: Point Locations" at the top of the page to navigate back to the point location list.

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Point 7 of 10.
Point Name: Cardoza Ridge

Point Location Details

Based on the latitude and longitude provided in Section 8 for this point, we have identified the following attributes related to the location of this point. Please answer the remaining items in the table.

POINT LOCATION

ATTRIBUTE	VALUE	ATTRIBUTE	VALUE
Latitude	37.651146	**Longitude**	-120.399583
Parcel No.	071-170-009	**1/4 of 1/4 Section**	-Select-
County	Tuolumne	**1/4 Section**	-Select-
California Coordinates Zone (NAD '83)	3	**Section**	26
California Coordinates North (NAD '83)	2059575	**Township and Direction**	03 S
California Coordinates East (NAD '83)	6590738	**Range and Direction**	14 E
Base and Meridian	M	**Name of Water Source at Point**	
Water Source is Tributary to		**Thence:**	
Thence:		**Thence:**	

What is the purpose of use for the diversion from this point? On what type of place of use will the diverted water for this purpose be used?

PLACE AND PURPOSE OF USE DETAILS	
Purpose of Use	**Place of use (Ex. Crop Blocks, Reservoir, Channel)**
See Attachment Nos. 2 & 3	

Type of Diversion and Amount Diverted at this Point

The series of questions below is designed to determine the type of diversion occurring at this point. Please review and answer all questions. If your answer is "yes" to the first question, you can skip the remaining questions.

Within this section you will also be asked to identify the total amount of water diverted and season of diversion/collection at this point.

(1) Are you proposing that this point be designated as a location of an offstream storage facility? ◉ Yes ○ No

Point Type: Offstream Storage

By designating this point as an offstream storage facility, you are declaring that the point is not located on a stream channel. Offstream storage facility points are not points of diversion, therefore you should not answer the remaining questions for this point. Please skip to the bottom of this page and select "Next" to move to the next page of the form.

(2) Answer the following general questions about this point:

(2a) Are you proposing to divert water by means of an onstream dam at this point? ○ Yes ○ No

(2b) Are you proposing to redivert water that has previously been diverted at another point identified in this application?

○ Yes ○ No

(3) Are you proposing to divert water by direct diversion from this point? ○ Yes ○ No

(4) Are you proposing to collect water in an aboveground storage facility that is located at this point? ○ Yes

○ No

(5) Are you proposing to divert water from this point to an aboveground storage facility that is not located at this point?

○ Yes ○ No

(6) Are you proposing to divert water from this point to an underground storage facility? ○ Yes ○ No

The navigation buttons below can be used to navigate between your points. Once you have entered in all the information requested above for each of your points, please click the "next" button to proceed to the next section. If you would like to view your point location map, click on "Previous" at the bottom of the page. If you would like to add, delete, or make edits to your point location, click on "Section 8: Point Locations" at the top of the page to navigate back to the point location list.

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Point 8 of 10.
Point Name: Montgomery Reservoir

Point Location Details

Based on the latitude and longitude provided in Section 8 for this point, we have identified the following attributes related to the location of this point. Please answer the remaining items in the table.

POINT LOCATION

ATTRIBUTE	VALUE	ATTRIBUTE	VALUE
Latitude	37.569434	**Longitude**	-120.424758
Parcel No.	038110025	**1/4 of 1/4 Section**	-Select-
County	Merced	**1/4 Section**	-Select-
California Coordinates Zone (NAD '83)	3	**Section**	22
California Coordinates North (NAD '83)	2029816	**Township and Direction**	04 S
California Coordinates East (NAD '83)	6583473	**Range and Direction**	14 E
Base and Meridian	M	**Name of Water Source at Point**	
Water Source is Tributary to		**Thence:**	
Thence:		**Thence:**	

What is the purpose of use for the diversion from this point? On what type of place of use will the diverted water for this purpose be used?

PLACE AND PURPOSE OF USE DETAILS	
Purpose of Use	**Place of use (Ex. Crop Blocks, Reservoir, Channel)**
See Attachment Nos. 2 & 3	

Type of Diversion and Amount Diverted at this Point

The series of questions below is designed to determine the type of diversion occurring at this point. Please review and answer all questions. If your answer is "yes" to the first question, you can skip the remaining questions.

Within this section you will also be asked to identify the total amount of water diverted and season of diversion/collection at this point.

(1) Are you proposing that this point be designated as a location of an offstream storage facility? ◉ Yes ○ No

Point Type: Offstream Storage

By designating this point as an offstream storage facility, you are declaring that the point is not located on a stream channel. Offstream storage facility points are not points of diversion, therefore you should not answer the remaining questions for this point. Please skip to the bottom of this page and select "Next" to move to the next page of the form.

(2) Answer the following general questions about this point:

(2a) Are you proposing to divert water by means of an onstream dam at this point? ○ Yes ○ No

(2b) Are you proposing to redivert water that has previously been diverted at another point identified in this application?

○ Yes ○ No

(3) Are you proposing to divert water by direct diversion from this point? ○ Yes ○ No

(4) Are you proposing to collect water in an aboveground storage facility that is located at this point? ○ Yes

○ No

(5) Are you proposing to divert water from this point to an aboveground storage facility that is not located at this point?

○ Yes ○ No

(6) Are you proposing to divert water from this point to an underground storage facility? ○ Yes ○ No

The navigation buttons below can be used to navigate between your points. Once you have entered in all the information requested above for each of your points, please click the "next" button to proceed to the next section. If you would like to view your point location map, click on "Previous" at the bottom of the page. If you would like to add, delete, or make edits to your point location, click on "Section 8: Point Locations" at the top of the page to navigate back to the point location list.

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Point 9 of 10.
Point Name: Dickenson

Point Location Details

Based on the latitude and longitude provided in Section 8 for this point, we have identified the following attributes related to the location of this point. Please answer the remaining items in the table.

POINT LOCATION

ATTRIBUTE	VALUE	ATTRIBUTE	VALUE
Latitude	37.603069	**Longitude**	-120.621173
Parcel No.	020002042	**1/4 of 1/4 Section**	-Select-
County	Stanislaus	**1/4 Section**	-Select-
California Coordinates Zone (NAD '83)	3	**Section**	11
California Coordinates North (NAD '83)	2042077	**Township and Direction**	04 S
California Coordinates East (NAD '83)	6526564	**Range and Direction**	12 E
Base and Meridian	M	**Name of Water Source at Point**	
Water Source is Tributary to		**Thence:**	
Thence:		**Thence:**	

What is the purpose of use for the diversion from this point? On what type of place of use will the diverted water for this purpose be used?

PLACE AND PURPOSE OF USE DETAILS	
Purpose of Use	**Place of use (Ex. Crop Blocks, Reservoir, Channel)**
See Attachment Nos. 2 & 3	

Type of Diversion and Amount Diverted at this Point

The series of questions below is designed to determine the type of diversion occurring at this point. Please review and answer all questions. If your answer is "yes" to the first question, you can skip the remaining questions.

Within this section you will also be asked to identify the total amount of water diverted and season of diversion/collection at this point.

(1) Are you proposing that this point be designated as a location of an offstream storage facility? ◉ Yes ○ No

Point Type: Offstream Storage

By designating this point as an offstream storage facility, you are declaring that the point is not located on a stream channel. Offstream storage facility points are not points of diversion, therefore you should not answer the remaining questions for this point. Please skip to the bottom of this page and select "Next" to move to the next page of the form.

(2) Answer the following general questions about this point:

(2a) Are you proposing to divert water by means of an onstream dam at this point? ○ Yes ○ No

(2b) Are you proposing to redivert water that has previously been diverted at another point identified in this application?

○ Yes ○ No

(3) Are you proposing to divert water by direct diversion from this point? ○ Yes ○ No

(4) Are you proposing to collect water in an aboveground storage facility that is located at this point? ○ Yes

○ No

(5) Are you proposing to divert water from this point to an aboveground storage facility that is not located at this point?

○ Yes ○ No

(6) Are you proposing to divert water from this point to an underground storage facility? ○ Yes ○ No

The navigation buttons below can be used to navigate between your points. Once you have entered in all the information requested above for each of your points, please click the "next" button to proceed to the next section. If you would like to view your point location map, click on "Previous" at the bottom of the page. If you would like to add, delete, or make edits to your point location, click on "Section 8: Point Locations" at the top of the page to navigate back to the point location list.

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Point 10 of 10.
Point Name: Roberts Ferry

Point Location Details

Based on the latitude and longitude provided in Section 8 for this point, we have identified the following attributes related to the location of this point. Please answer the remaining items in the table.

POINT LOCATION

ATTRIBUTE	VALUE	ATTRIBUTE	VALUE
Latitude	37.642439	**Longitude**	-120.630010
Parcel No.	008007026	**1/4 of 1/4 Section**	-Select-
County	Stanislaus	**1/4 Section**	-Select-
California Coordinates Zone (NAD '83)	3	**Section**	27
California Coordinates North (NAD '83)	2056415	**Township and Direction**	03 S
California Coordinates East (NAD '83)	6524024	**Range and Direction**	12 E
Base and Meridian	M	**Name of Water Source at Point**	
Water Source is Tributary to		**Thence:**	
Thence:		**Thence:**	

What is the purpose of use for the diversion from this point? On what type of place of use will the diverted water for this purpose be used?

PLACE AND PURPOSE OF USE DETAILS	
Purpose of Use	**Place of use (Ex. Crop Blocks, Reservoir, Channel)**
See Attachment Nos. 2 & 3	

Type of Diversion and Amount Diverted at this Point

The series of questions below is designed to determine the type of diversion occurring at this point. Please review and answer all questions. If your answer is "yes" to the first question, you can skip the remaining questions.

Within this section you will also be asked to identify the total amount of water diverted and season of diversion/collection at this point.

(1) Are you proposing that this point be designated as a location of an offstream storage facility? ◉ Yes ○ No

Point Type: Offstream Storage

By designating this point as an offstream storage facility, you are declaring that the point is not located on a stream channel. Offstream storage facility points are not points of diversion, therefore you should not answer the remaining questions for this point. Please skip to the bottom of this page and select "Next" to move to the next page of the form.

(2) Answer the following general questions about this point:

(2a) Are you proposing to divert water by means of an onstream dam at this point? ○ Yes ○ No

(2b) Are you proposing to redivert water that has previously been diverted at another point identified in this application?

○ Yes ○ No

(3) Are you proposing to divert water by direct diversion from this point? ○ Yes ○ No

(4) Are you proposing to collect water in an aboveground storage facility that is located at this point? ○ Yes

○ No

(5) Are you proposing to divert water from this point to an aboveground storage facility that is not located at this point?

○ Yes ○ No

(6) Are you proposing to divert water from this point to an underground storage facility? ○ Yes ○ No

The navigation buttons below can be used to navigate between your points. Once you have entered in all the information requested above for each of your points, please click the "next" button to proceed to the next section. If you would like to view your point location map, click on "Previous" at the bottom of the page. If you would like to add, delete, or make edits to your point location, click on "Section 8: Point Locations" at the top of the page to navigate back to the point location list.

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SECTION 11: ADDITIONAL FACILITIES

Section 1: Owner Information
Section 2: Agent and Consultant
Section 3: Permit Type
Section 4: Map Requirements
Section 5: Project Description
Section 6: Purpose of Use
Section 7: Place of Use
Section 8: Point Locations
Section 9: Project Screening
Section 10: Point Details

In this section, you will provide the detailed information regarding conveyance, distribution, and reservoir.

(1) Provide the following information to describe the conveyance conduits involved for your project. In the table ℹ️ , please define a start location and a specified end location for each conduit (for example: offstream reservoir, intended place of use). Items may be entered into the tables below by clicking the "+" sign, edited using the pencil icon, and deleted using the trash icon. The table information (start locations, end locations, and conduit names) should be reflected in your project map in Section 4 and be of sufficient detail to provide an understanding of how water is moved from the source to the intended beneficial use. You can view example maps and narrative descriptions on the mapping instructions on the Division of Water Right's website.

Type of Conduit	Name of Conduit	Start Location	End Location	Type	Material	Cross-Section (inches or feet)
Not found						

*Other conduit type or conduit material, specify name of conduit and describe:

See Attachment Nos. 1 & 3 for above information

Please provide a description of your conveyance system below. If you are anticipating significant conveyance losses include in this description and provide supporting calculations.

See Attachment Nos. 1 & 3 for above information

You have the option to upload a schematic diagram of the conveyance conduits involved in your project in support of the description and values provided above. This optional schematic does not replace or remove the requirements to include main conduits in your project map (see mapping instructions on the Division of Water Right's webpage for more details on project map requirements). Schematics may be computer generated or hand drawn. You may upload an existing schematic that shows your project operations. Example schematics are available here (../Content/Conduit Conveyance Examples.docx).

Please upload the schematic diagram at the bottom of the page (optional).

(2) Tank and Bladder Information

Facility Name	Type	Capacity (gallons)	Material	
Not found				

*Other Tank or Bladder material, describe:

(3) If applicable: please upload any reservoir surveys and/or associated calculations with your reservoir(s) at the bottom of the page.

Please upload all requested documents here:

Choose Files No file chosen

Upload

(Uploaded files:)
Delete Attachment 1 - Project Description.pdf (/MT/TakeSurvey/Download?fileName=1072_438324_84622_AppropriativeWa__Section11Upload_1.pdf)
Delete Attachment 2 - Purpose Amount and Season.pdf (/MT/TakeSurvey/Download?fileName=1072_438324_84622_AppropriativeWa__Section11Upload_2.pdf)
Delete Attachment 3 - Point of Diversion.pdf (/MT/TakeSurvey/Download?fileName=1072_438324_84622_AppropriativeWa__Section11Upload_3.pdf)
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SECTION 12: TOTAL AMOUNT OF WATER REQUESTED

In this section, you will provide the total amounts and rates for the water requested under this application (face value). As noted before, amount of water, season of diversion, and the maximum rate of water requested under this application cannot be increased once submitted (California Code of Regulations, section 699 (https://govt.westlaw.com/calregs/Document/I95A817A0D45A11DEA95CA4428EC25FA0?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=(sc.Default)&bhcp=1)).

(1) Enter the maximum combined amount of direct diversion for all diversion points (AFA):

2700000

(2) Enter the maximum combined amount of storage for all diversion points (AFA):

2700000

3) Enter the maximum combined amount of direct diversion and storage for all diversion points (AFA):

2700000

(4) Are you proposing a maximum combined rate and/or amount cap for multiple applications and/or existing water rights?

○ Yes ◉ No

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SECTION 13.0: POLICY EXCEPTIONS AND EXPEDITED PROCESSING

The Policy for Maintaining Instream Flows in Northern California Coastal Streams (https://www.waterboards.ca.gov/waterrights/water_issues/programs/instream_flows/docs/adopted_policy.pdf) section 3.3.2.5 allows: (1) exceptions to one or more of the diversion criteria for all or part of an application in cases where (a) the applicant's existing diversions under another valid basis of right will be reduced if the application is approved and (b) the benefit to fishery resources of the reduction outweighs the potential impacts to fishery resources if the application is approved; and (2) where feasible, expedited processing of petitions that will result in enhanced conditions for fish and wildlife and any water right applications or petitions that accompany them. ℹ️

Is your project located within the geographic area of the Policy for Maintaining Instream Flows in Northern California Coastal Streams ℹ️ AND are you requesting one of the following:

(1) An exception to one or more of the diversion criteria for all or part of your application; or

(2) An expedited processing of a petition (accompanying this application) that will result in enhanced conditions for fish and wildlife?

◯ Yes ◯ No

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SECTION 14.1: GROUNDWATER

- Section 1: Owner Information
- Section 2: Agent and Consultant
- Section 3: Permit Type
- Section 4: Map Requirements
- Section 5: Project Description
- Section 6: Purpose of Use
- Section 7: Place of Use
- Section 8: Point Locations
- Section 9: Project Screening
- Section 10: Point Details
- Section 11: Additional Facilities
- Section 12: Total Amount Requested
- Section 13: Policy Exceptions

Are you planning to divert water into a groundwater basin?

◉ Yes | ○ No

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SECTION 14.2: UNDERGROUND STORAGE SUPPLEMENT TO APPLICATION

The purpose of this portion of the application is to collect information pertaining to your underground storage project ℹ️ and to ensure your application submittal is complete. The underground storage supplement consists of three sections as follows:

Section 14.3 (Methods of Underground Storage and Associated Conveyance Infrastructure): In this section you will provide descriptions of the infrastructure used to convey water from your point of diversion to the location of groundwater recharge and the methods of groundwater recharge associated with your project.

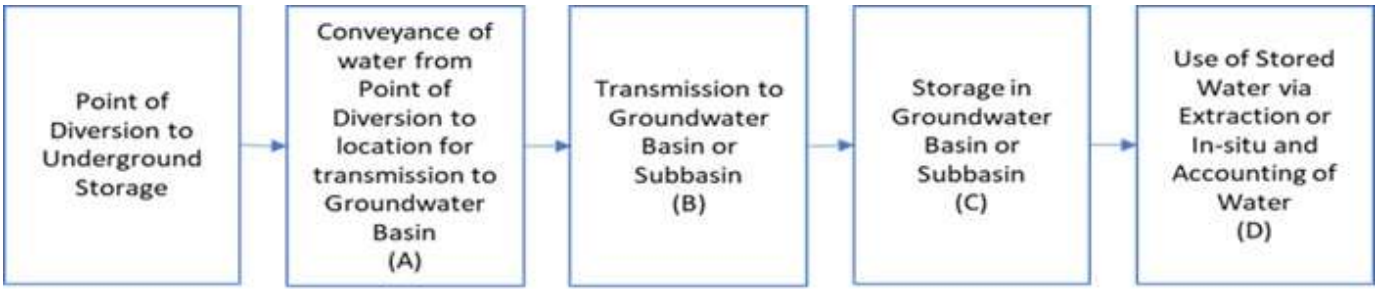
Section 14.4 (Information related to Groundwater Basins): In this section you will provide information related to the physical characteristics and status of your groundwater basin.

Section 14.5 (Water Budget Accounting Methodology): In this section you will provide a description of the accounting of water for tracking water diverted to underground storage and water extracted from underground storage for beneficial use.

Before you begin, please consider the details of your entire project including but not limited to method of diversion, amount, diversion rate, timing, quantity of water replenished by the project, purpose of use, and water budget accounting methodology. Prospective applicants are encouraged to consider methods to model the fate of water transmitted to underground storage in both the project planning and accounting development steps.

For selecting the purposes of use, don't forget to check out the Purposes of Use for Underground Storage Fact Sheet (https://www.waterboards.ca.gov/waterrights/water_issues/programs/applications/docs/purposes_of_use_fact_sheet_final.pdf). The fact sheet provides general information and guidance for choosing the uses applicable for your underground storage project. The fact sheet also provides a brief discussion on the six undesirable results pursuant to the Sustainable Groundwater Management Act.

The flowchart below represents the typical movement of water for underground storage projects. As you proceed through the underground storage supplement portion, some questions will have a notation at the end corresponding to the flowchart for reference. For example, letter (A) represents a question requesting information related to the conveyance of water.



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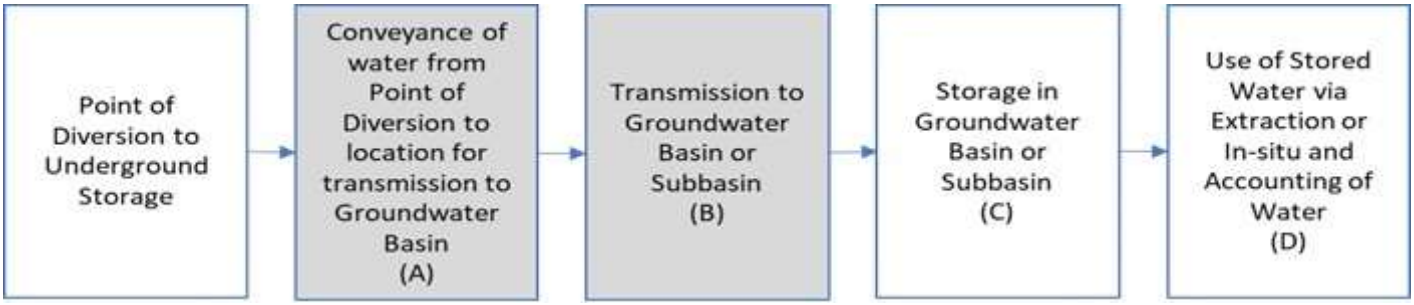
SECTION 14.3: METHODS OF GROUNDWATER RECHARGE AND ASSOCIATED INFRASTRUCTURE (A) (B)



In this section, you will provide descriptions of the infrastructure used to convey water from your point of diversion to underground storage to the location of groundwater recharge and the methods of groundwater recharge associated with your project. Recharge of groundwater can be accomplished using a variety of methods. For the purposes of selecting method(s) of groundwater recharge, this section is grouped into four categories:

1. Flooding Agricultural Lands (i.e., on-farm groundwater recharge or flooding fallowed fields)
2. Recharge Basins (i.e., percolation pond)
3. Methods Involving Wells (including injection wells and dry wells)
4. Post-storage In-stream and Canal Replenishment

These methods are consistent with the methods identified in a report titled “Appendix D: Water Available for Replenishment - Methods of Replenishment Guidance" (https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Data-and-Tools/Files/Statewide-Reports/WAFR/Final/Appendix-D-for-Water-Available-for-Replenishment---Final-Report.pdf) prepared by the Department of Water Resources.

You may select one or multiple methods of recharge, as applicable for your project. If a specific method of recharge for your project is not listed, please select “other method” and provide supporting information.

Flooding Lands

☑ Flooding Farmland (e.g. On-Farm Recharge)

If you plan to apply water to dormant crops or an area that will be planted with crops after infiltration of recharge water (e.g. pre-irrigation), please evaluate the potential for dormant or future crop water use and consider if incidental direct diversion for irrigation may occur. Incidental direct diversion for irrigation may be added to Section 6 (purpose of use) and also as a point type (direct diversion) in Section 8.

(1) Describe the physical works and operations used to convey the water from the point of diversion to underground storage to the above ground recharge area. This description should include information describing the location and capacity of the project headworks and conduits system and a description of any proposed or existing pretreatment facilities where applicable. (A)

See Attachment Nos. 1 & 2

(2) Describe the physical works and operations used to infiltrate the water into the groundwater basin. Description should include the surface area, depth, and capacities of the recharge area(s). (B)

See Attachment Nos. 1 & 2

(2b) Provide estimations showing the amount requested in your application can be reasonably transmitted into underground storage. These should include calculations or modeling results for estimating infiltration rates and potential losses (for example, via evaporation, via gradient to an adjacent aquifer, or return to a surface channel) and should take into account properties of the soil and the aquifer. Upload all documents at the bottom of the page. (B)

(3) Provide calculations for estimating the amount of water applied to pre-irrigation. For these calculations you may consider variables including soil storage capacity, root depth of crops in infiltration area, and size of infiltration area that is/may be planted to crops. Upload all documents at the bottom of the page. (A) or (B)

(4a) Identify crop types by acreage.

TBD

(4b) Upload spatial data for crops by type at the bottom of the page

☐ Flooding Undeveloped Lands

Recharge Basins

☑ Recharge Basins (Percolation Pond)

(1) Describe the physical works and operations used to convey the water from the point of diversion to underground storage to the above ground recharge area. This description should include information describing the location and capacity of the project headworks and conduits system and a description of any proposed or existing pretreatment facilities where applicable. (A)

See Attachment Nos. 1 & 2

(2) Describe the physical works and operations used to infiltrate the water into the groundwater basin. Description should include the surface area, depth, and capacities of the recharge area(s). (B)

See Attachment Nos. 1 & 2

(3) Provide estimations showing the amount requested in your application can be reasonably transmitted into underground storage. These should include calculations or modeling results for estimating infiltration rates and potential losses (for example, via evaporation, via gradient to an adjacent aquifer, or return to a surface channel) and should take into account properties of the soil and the aquifer. Upload all documents at the bottom of the page. (B)

Methods Involving Wells (Injection Wells, Aquifer Storage and Recovery, or Dry Wells)

☑ Methods Involving Wells (Injection Wells, Aquifer Storage and Recovery, or Dry Wells)

(1) Describe the physical works and operations used to convey the water from the point of diversion to underground storage to the well(s). This description should include information describing the location and capacity of the project headworks and conduits system and a description of any proposed or existing pretreatment facilities where applicable. (A)

See Attachment Nos. 1 & 2

(2) Identify type of well(s) (e.g., Injection, Aquifer Storage and Recovery, or Dry well).

See Attachment Nos. 1 & 2

(3) Provide information on the physical works and operations used to transmit water into the groundwater basin including the number of wells, the location of wells, whether the wells are existing or unbuilt, the depth of well(s), screening interval information, and injection rates. Upload a copy of applicable well logs at the bottom of the page. (B)

See Attachment Nos. 1 & 2

(4) Upload copies of any other permitting or approval from other agencies for the wells associated with your project or documentation showing the status of any consultation activities you are engaged in as part of a permitting process. Upload all documents at the bottom of the page. (B)

(5) Provide estimations showing the amount requested in your application can be reasonably transmitted into underground storage. These should include calculations or modeling results for estimating infiltration rates and potential losses (for example, via evaporation, via gradient to an adjacent aquifer, or return to a surface channel) and should take into account properties of the soil and the aquifer. Upload all documents at the bottom of the page. (B)

Canal and Post Storage In-Stream Recharge

☑ Unlined Canals

(1) Describe the physical works and operations used to convey the water from the point of diversion to underground storage to the infiltration location (e.g. stream or canal). This description should include information describing the location and capacity of the project headworks and conduits system and a description of any proposed or existing pretreatment facilities where applicable. (A)

See Attachment Nos. 1 & 2

(2) Describe any physical works and operations used to infiltrate the water into the groundwater basin. Include location and extent of canals. Upload all documents at the bottom of the page. (B)

(3) Provide estimations showing the amount requested in your application can be reasonably transmitted into underground storage. These should include calculations or modeling results for estimating infiltration rates and potential losses (for example, via evaporation, via gradient to an adjacent aquifer, or return to a surface channel) and should take into account properties of the soil and the aquifer. Upload all documents at the bottom of the page. (B)

☑ Stream Channel after Aboveground Storage

(1) Describe the physical works and operations used to convey the water from the point of diversion to underground storage to the stream channel. This description should include information describing the location and capacity of the project headworks and conduits system and a description of any proposed or existing pretreatment facilities where applicable. (A)

See Attachment Nos. 1 & 2

(2) Describe any physical works and operations used to infiltrate the water into the groundwater basin. (B)

See Attachment Nos. 1 & 2

(3) Provide estimations showing the amount requested in your application can be reasonably transmitted into underground storage. These should include calculations or modeling results for estimating infiltration rates and potential losses (for example, via evaporation, via gradient to an adjacent aquifer, or return to a surface channel) and should take into account properties of the soil and the aquifer. Upload all documents at the bottom of the page. (B)

(4) Identify upstream and downstream limits of stream channel (NAD 83 Coordinates System). This will designate a upper and lower limit for rediversion to underground storage.

See Attachment Nos. 1 & 2

☑ Other

(1) Describe the physical works and operations used to convey the water from the point of diversion to underground storage to the above ground recharge area. This description should include information on the project headworks and conduits system and a description of any proposed or existing pretreatment facilities where applicable. (A)

See Attachment Nos. 1 & 2

(2) Describe the physical works and operations used to infiltrate the water into the groundwater basin. Description should include the surface area, depth, and capacities of the recharge area(s). (B)

See Attachment Nos. 1 & 2

(3) Provide estimations showing the amount requested in your application can be reasonably transmitted into underground storage. These should include calculations or modeling results for estimating infiltration rates and potential losses (for example, via evaporation, via gradient to an adjacent aquifer, or return to a surface channel) and should take into account properties of the soil and the aquifer. Upload all documents at the bottom of the page. (B)

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SECTION 14.4: INFORMATION RELATED TO GROUNDWATER BASIN (C)

Section 1: Owner Information

Section 2: Agent and Consultant

Section 3: Permit Type

Section 4: Map Requirements

Section 5: Project Description

Section 6: Purpose of Use

Section 7: Place of Use

Section 8: Point Locations

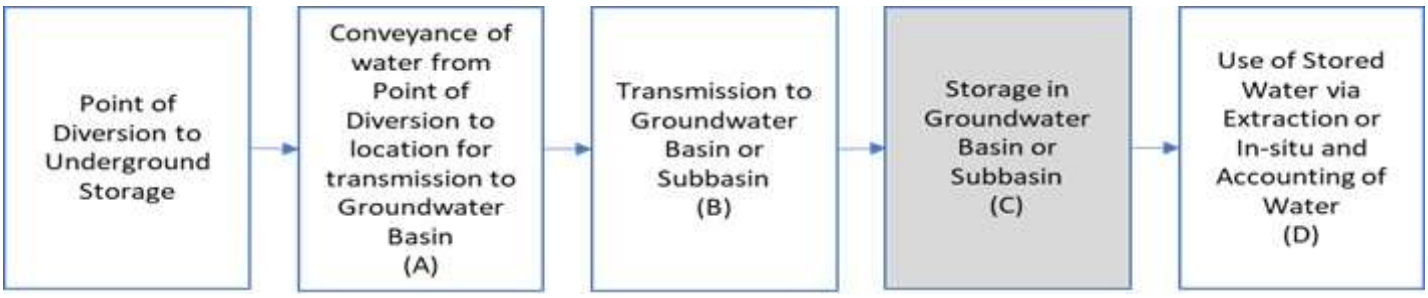
Section 9: Project Screening

Section 10: Point Details

Section 11: Additional Facilities

Section 12: Total Amount Requested

Section 13: Policy Exceptions



In this section, you will be providing information related to your groundwater basin. Information may be found in groundwater sustainability plans (if available) or in the California Department of Water Resources Bulletin 118 (https://water.ca.gov/Programs/Groundwater-Management/Bulletin-118). Prospective applicants are encouraged to consider methods to model the fate of water transmitted to underground storage in both the project planning and accounting development steps.

(1) Provide the requested information below.

INFORMATION OF GROUNDWATER BASIN(S)			
ATTRIBUTE	**VALUE**	**ATTRIBUTE**	**VALUE**
Name of Basin(s) / Sub-Basin(s)		Estimated Storage Capacity of underground reservoir(s) [groundwater basin(s) / sub-basin(s)] (acre-feet)	
State depth of groundwater table in spreading grounds or immediate vicinity below ground surface (feet)		Date of measurement groundwater table depth	
Location of measurement depth of groundwater table (NAD 83) North:		Location of measurement depth of groundwater table (NAD '83) East:	
Provide any historic maximum depth to the groundwater table in the area (feet)		Date of measurement historic maximum depth of the groundwater table	
Location of measurement historic maximum depth of groundwater table (NAD 83) North:		Location of measurement historic maximum depth of groundwater table (NAD '83) East:	
Provide any historic minimum depth to the groundwater table in the area (feet)		Date of measurement historic minimum depth of the groundwater table	
Location of measurement historic minimum depth of groundwater table (NAD 83) North:		Location of measurement historic minimum depth of groundwater table (NAD '83) East:	

(2) In the table above, you provided descriptive information for various parameters of your groundwater basin (including the name of your groundwater basin, capacity, and the depth of groundwater table, etc.,). Below you will provide additional information related to the uses and categorization of your groundwater basin. Information may be found in

groundwater sustainability plans ℹ️ (if available) or in the California Department of Water Resources Bulletin 118 (https://water.ca.gov/Programs/Groundwater-Management/Bulletin-118). ℹ️

(2a) Describe existing use of groundwater basin(s) or sub-basin(s).

See Attachment Nos. 1 & 2

(2b) Describe any proposed change in use of groundwater basin(s) or sub-basin(s).

See Attachment Nos. 1 & 2

(2c) Does your application propose diverting water to underground storage in a groundwater basin identified in Bulletin 118? If Yes, complete the remaining questions below. If No, move to next section.

◉ Yes ○ No

(2d) Identify your groundwater basin or sub basin prioritization as defined in Bulletin 118 (https://water.ca.gov/Programs/Groundwater-Management/Bulletin-118).

○ High ◉ Medium ○ Low ○ Very Low

(2e) Does your basin have or is your basin required to have? (choose one)

◉ Groundwater Sustainability Plan (complete remaining questions below)
○ Groundwater Sustainability Plan Alternative (complete remaining questions below)
○ Adjudication (move to the next section)
○ None (move to the next section)

(2f) Are you a groundwater sustainability agency or a local agency as defined by Sustainability Groundwater Management Act?

○ Yes | ◉ No

(2g) Is your application for a project that is identified in a groundwater sustainability plan?

◉ Yes | ○ No

If yes, what is the role of your application in the sustainability plan?

See Attachment Nos. 1 & 2

(2h) Has a groundwater sustainability agency been established?

◉ Yes | ○ No

If yes, please provide the groundwater sustainability agency below.

See Attachment Nos. 1 & 2

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SECTION 14.5: DESCRIPTION OF WATER BUDGET (INCLUDING BENEFICIAL USE ACCOUNTING) (D)

Section 1: Owner Information

Section 2: Agent and Consultant

Section 3: Permit Type

Section 4: Map Requirements

Section 5: Project Description

Section 6: Purpose of Use

Section 7: Place of Use

Section 8: Point Locations

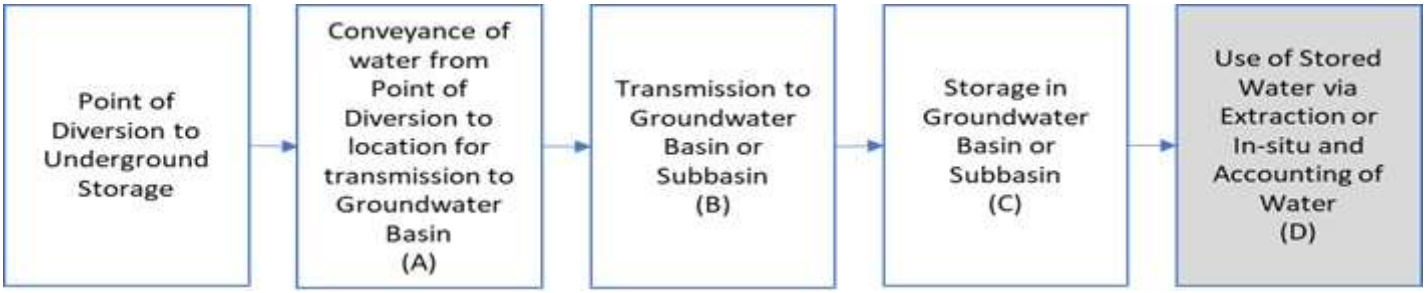
Section 9: Project Screening

Section 10: Point Details

Section 11: Additional Facilities

Section 12: Total Amount Requested

Section 13: Policy Exceptions



The California Water Code, section 10721 defines a water budget as “an accounting of the total groundwater and surface water entering and leaving a basin including the changes in the amount of water stored.” The methodology used to prepare a water budget may consider the approach discussed in the Department of Water Resources – Water Budget Handbook or an accounting plan to be submitted to the State Water Resources Control Board and subject to the approval of the Deputy Director for Water Rights.

In this section you will describe your accounting for beneficial use. A water budget is important to help assure that water diverted to underground storage is used for the identified purpose(s) and to monitor injury to senior groundwater water rights or harm to environmental resources.

Describe the method for measuring and accounting of the water diversions and use. Include the following as applicable:

- Method for measuring and accounting extraction of groundwater from the underlying aquifer for beneficial use.
- Method for accounting of change in groundwater storage (net change in the volume of groundwater stored within the underlying aquifer of the water budget zone).
- Explain whether the method of accounting is covered by a Groundwater Sustainability Plan or judgment of the court dictating an accounting method.
- If other parties will extract and use water, describe the method for accounting of water extracted for beneficial use by persons other than the Applicant. Upload copy of written agreement between applicant and other parties in which other parties consent to extraction and use of stored water requested in this application.
- If purpose(s) of use are extractive, how quickly you plan to extract and use of stored water?
- Provide the following:
    1. Method for accounting of inflow to the groundwater basin by water source type including infiltration of precipitation, runoff, or subsurface groundwater inflow.
    2. Method for accounting of outflow from groundwater system by water use sector, including but not limited to groundwater discharge to surface water sources and subsurface groundwater outflow.
- Are you contemplating groundwater banking operation using water diverted under this application? If yes, please explain.

N/A

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SECTION 15: EFFECTS OF PROPOSED APPROPRIATION ON FISH AND WILDLIFE

Water diversion projects may result in direct and indirect effects on fish and wildlife. Project construction, physical components of the project, and operations of the project may all contribute to such effects. For example, project construction may result in release of pollutants and subsequent water quality issues that in turn affect local fish and wildlife. In addition, project operations may result in loss of stream flows. Loss of flows may effect fish and wildlife in various ways including but not limited to: reduction or elimination of riparian plants, loss of fish habitat, and invasion of non-native species. When determining the extent of the fishery protection needed at water diversion projects, the

presence or absence of fish or non-fish aquatic species in a stream is an important consideration. Streams that contain fish require a higher level of protection than streams that do not contain fish, in large part because fish are mobile and require more physical aquatic habitat (living space) than non-fish species. In this section you will provide all data and information available regarding the extent, if any, to which fish and wildlife could be affected by your project.

(1) You are required to review all data and information reasonably available concerning the extent, if any, to which fish and wildlife would be affected by your project. Describe your review below and either provide links to the websites reviewed or attach documents you reviewed.

See Attachment Nos. 7 and 8

Are you uploading a document to supplement your answer? If so, please upload at the bottom of the page.

◉ Yes | ○ No

(2) If you are not proposing any measures to be taken for the protection of fish and wildlife in connection with your project, please explain why below.

See Attachment Nos. 7 and 8

(3) If you are proposing any measures to be taken for the protection of fish and wildlife in connection with your project, please provide a statement of the proposed measures below and include a description of how each measure will protect fish and wildlife.

See Attachment Nos. 7 and 8

(4) You are required to contact the California Department of Fish and Wildlife to obtain any relevant data or information they may have, any measures they recommend for protection of fish and wildlife in connection with your project, and to inquire about the Lake or Streambed Alteration Agreement program. In addition to the requirement to contact the California Department of Fish and Wildlife in Water Code Section 1260(j), the purpose of the contact is to obtain input on possible project conditioning protective of possible impacts to fish and wildlife that can be built into the project as proposed. Designing a project with protective conditions built into the project design may reduce the likelihood of California Department of Fish and Wildlife opposition (protest) of your project and thus may reduce the time to process your application. Provide the name of the California Department of Fish and Wildlife Regional Staff you contacted and the date of contact below.

CDFW Regional Staff Contact	See Attachment No. 7
Date of Initial Contact	

Upload documentation of your initial contact with California Department of Fish and Wildlife at the bottom of the page.

(4a) If California Department of Fish and Wildlife provided data and information concerning any measures they recommended for protection of fish and wildlife, please upload the documentation of the information and measures at the bottom of the page.

(4b) Did you incorporate all the measures suggested by California Department of Fish and Wildlife?

○ Yes ○ No ◉ N/A

(4c) Did the California Department of Fish and Wildlife indicate that a Lake or Streambed Alteration Agreement would be required for your project?

○ Yes | ◉ No

If you have already obtained a Lake or Streambed Alteration Agreement, please upload it at the bottom of the page.

(5) In order to effectively apply protective measures for projects located within the geographic area on the Policy for Maintaining Instream Flows in Northern California Coastal Streams (Policy), a stream classification and an upper limit of anadromy determination will be made by the Division of Water Rights pursuant to the methods described in Policy section A.1.6 and A.1.4 (https://www.waterboards.ca.gov/waterrights/water_issues/programs/instream_flows/) respectively. As part of this process, the Division of Water Rights may consider information collected by the project consultant. The information provided by the consultant should discuss findings related to the habitat indicators discussed under Policy section A.1.6.1 (Note: this is not the survey discussed under Policy section A.1.6.2 Determination of Stream Class by Stream Survey).

If your project consultant has collected information to support Division determination of stream classification and the location of the upper limit of anadromy in accordance with Policy sections A.1.6 and A.1.4, upload it at the bottom of the page.

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SECTION 16: DEMONSTRATION OF REASONABLE LIKELIHOOD OF WATER AVAILABILITY

(1) California Water Code section 1260(k) requires that every application for a water right permit set forth sufficient information to demonstrate a reasonable likelihood that unappropriated water is available for the proposed appropriation. As part of this process, you will need to upload a preliminary analysis demonstrating that there is a reasonable likelihood that unappropriated water is available for your proposed appropriation. This analysis generally addresses the availability of unappropriated water in the source stream(s) based on information that speaks to water supply, existing demand, and

instream needs. This may include historic stream flow and/or precipitation data during the season of diversion requested in the application, the size of the watershed draining to the proposed point of diversion, and existing demand from other users drawing from the same source stream(s), and data related to instream needs.

Water supply information is available from the United States Geological Survey (USGS) (https://waterdata.usgs.gov/nwis) or the California Data Exchange Center (http://cdec.water.ca.gov/). Water right demand upstream and downstream of your project may be obtained by using the Division of Water Rights electronic Water Rights Information System (https://www.waterboards.ca.gov/waterrights/water_issues/programs/ewrims/). Information regarding instream needs downstream of your project may be found in a variety of sources including independent studies, studies by fishery agencies, eWRIMS, Water Rights Orders and Decisions, and the Policy for Maintaining Instream Flows in Northern California Coastal Streams. Examples of applications that have successfully met this requirement and been accepted for processing are available upon request from the contacts listed on the Permitting Section webpage (https://www.waterboards.ca.gov/waterrights/water_issues/programs/applications/#contacts).

Projects identified to be within the geographic area of the Policy for Maintaining Instream Flows in Northern California Coastal Streams (https://www.waterboards.ca.gov/waterrights/water_issues/programs/instream_flows/) (Policy) may prepare a Water Supply Report in accordance with Appendices A and B of the Policy in lieu of the water availability described above. In addition, projects located outside of the geographic area of the Policy are not prohibited from completing a Water Supply Report to fulfill the 1260(k) requirement. An example of a Water Supply Report is available upon request. This analysis should be accompanied by information demonstrating water availability for the project with consideration of instream needs in the immediate watershed of the project and along the downstream flow path.

Upload preliminary water availability analysis:

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Delete Attachment 4 - Water Availability.pdf (/MT/TakeSurvey/Download?fileName=1072_438324_67879_AppropriativeWa__Analysis_1.pdf)

(2) Complete the following table if the stream(s) on which your diversion is located dries up at any point downstream of your project. Click on the "+" sign to add a row to the table.

Source Name	Dry Downstream (Yes/No)	Begin Typical Dry Date (MM)	Begin Typical Dry Date (DD)	End Typical Dry Date (MM)	End Typical Dry Date (DD)	
Not found						

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SECTION 17: CALIFORNIA ENVIRONMENTAL QUALITY ACT

The California Environmental Quality Act is a statute that requires state and local agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible. Before a water right permit may

be issued for your project, the State Water Resources Control Board must be in compliance with the California Environmental Quality Act. If a California Environmental Quality Act document is required for your project, a determination must be made of who is responsible for its preparation (i.e. lead agency). If the State Water Resources Control Board is determined to be the lead agency, you may be required to pay the costs associated with the environmental evaluation and preparation of the required documents, including environmental document review fees collected by the California Department of Fish and Wildlife.

Has an environmental document or notice of exemption been prepared for your project?

○ Yes ◉ No

If an environmental document or notice of exemption has not been prepared for your project, and you are aware of a public agency other than the State Water Resources Control Board assuming the role of lead agency for this project, please provide relevant contact information below.

Lead Agency	Turlock Irrigation District
Contact Person for Lead Agency	Tou B. Her
Phone Number	(209) 883-8365
Email Address	tbher@tid.org

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SECTION 18: FILING FEES

State Water Resources Control Board Filing Fee

To be accepted for initial review, you must submit the appropriate filing fees. Complete the table below by providing the maximum annual amount of water you are requesting to divert and the appropriate filing fee. Refer to Section 12 of this application form to determine the maximum annual amount of water you are requesting to divert. The filing fee is based on the maximum annual amount of water. **To determine your filing fee**, consult the State Water Resources Control Board's water rights fee schedule (https://www.waterboards.ca.gov/resources/fees/water_rights/ (https://www.waterboards.ca.gov/resources/fees/water_rights/)). **Please enter the Application Filing Fee you have calculated as response to "Application Filing Fee (dollars)". Underpayment of the required fees will result in REJECTION of your application. We strongly encourage applicants to confirm their calculated fees are correct ahead of filing. To do so, send a copy of your calculations to DWR-Applications@Waterboards.ca.gov and request staff confirmation.**

Maximum Annual Amount of Water (acre-feet per year)	2700000
Application Filing Fee (dollars)	579952.00

California Department of Fish and Wildlife Streamflow Protection Standards Fee

The State Water Resources Control Board also collects a fee of $850 payable to the California Department of Fish and Wildlife. With limited exceptions, you must submit this fee or your application may be subject to rejection.

What forms of payment are acceptable?

Payment is accepted by the methods listed on https://www.waterboards.ca.gov/make_a_payment/ (https://www.waterboards.ca.gov/make_a_payment/) or via manual payments (check, money order, or cashier check). An additional $850 fee made payable to the California Department of Fish and Wildlife is required pursuant to Public Resources Code section 10005. Please note that at this time the CDFW fee payment must be transmitted to the Division and the Division forwards the payment to CDFW.

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SECTION 19: DECLARATION AND SIGNATURE

Please initial each of the following statements.

MR

I acknowledge that, if I have designated an agent for this application, the agent is authorized to make any decisions on behalf of the applicant(s).

MR

I acknowledge that the amount of water, maximum rate of diversion, and/or season of diversion identified in this application cannot be increased once this application is submitted.

MR

I acknowledge that submittal of this application does not guarantee that I will receive a water right permit.

MR

I acknowledge that the State Water Resources Control Board encourages all applicants to wait for a water right permit to be issued before commencing construction of any facilities identified in an application. If I choose to begin construction of any facilities identified in this application prior to water right permit issuance, I assume all risks associated with such premature activity, including the risk of enforcement action and substantial expense associated with modification of such constructed facilities.

MR

I acknowledge that diversion and use of water prior to permit issuance may result in enforcement action.

By entering your name on the signature line, you are certifying that the information contained in your application is true under penalty of perjury.

I am the

◉ Applicant ○ Agent

Name	Michelle Reimers
Date	01/25/2022

You can view your application by clicking here (http://wb-sb-surveywiz/MTStaging/TakeSurvey/Summary?surveysTakenId=438324&showControls=True&asPDF=True). The application will open in a new tab. To return to this screen, simply close the tab with the application. If you need to make changes, you may use the navigation buttons at the top of this page, or the "Previous" button below to navigate to previous pages. You will not be able to edit your application after you click "Submit Application."

The next step for completing your application is to pay the State Water Resources Control Board's filing and the California Department of Fish and Wildlife's Streamflow Protection Standards Fee. A Notice of Submittal will be emailed to you upon your application submission. The submittal will include instructions on how and where to pay the fees.

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Submit

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ATTACHMENT 1

PROJECT DESCRIPTION

Contents

The purpose of this Application is to increase water supply reliability in the Turlock Irrigation District (TID) and Modesto Irrigation District (MID) (collectively the Districts) service areas and the surrounding region (Stanislaus, Merced, San Joaquin and Tuolumne Counties) and improve groundwater conditions through 1) diverting surface water in high flow periods for storage in below ground aquifers and/or in newly constructed off-stream above ground storage reservoirs, and 2) in-lieu groundwater recharge achieved by providing surface water to overlying and appropriative groundwater right holders, when available, to reduce groundwater extractions, storing the water that otherwise would have been extracted to allow aquifer recovery and extraction at a time where surplus surface water supplies are not available. The Application aims to capture surface water when available, during wet and above-normal years, to increase water supply reliability and groundwater levels, thereby improving regional conjunctive use programs.

The purpose of this Application is to provide the Division of Water Rights with sufficient information to constitute a complete Application pursuant to the California Code of Regulations (CCR) title 23, sections 656 and 675. The Districts believe the Application includes sufficiently detailed information to process the Application, however, the Districts understand staff may request further explanation or information and the Districts stand ready to provide any such information. In addition, the Districts recognize they will need to meet with the Department of Fish and Wildlife and may have to comply with the California Environmental Quality Act (CEQA).

1. Water Availability and Existing Facilities

Attachment No. 4 to this Application includes a Water Availability Analysis, which indicates the periods and potential volumes of water that may be available for appropriation under this Application. Based on the information contained in Attachment No. 4, the Districts believe there is a reasonable likelihood of water available for appropriation from the sources identified in this Application. This is further supported by periods when flooding has occurred within the general place of use identified by the Application and specifically within the boundaries of the Turlock and Modesto Subbasins.

The diversion of water requested under the Application will be through existing facilities, reoperation of existing facilities, and the development of new facilities. As indicated in Attachment No. 2 to this Application, existing facilities could be operated in various ways to support the diversion the water requested under the present Application. Several of the existing facilities are well known and documented as existing facilities covered under the Districts' existing water rights. Additional information regarding projects currently in the process of development and/or further evaluation is

primarily contained herein. These projects range from near-term facility improvements to long-term infrastructure investments. Several projects have been contemplated over the years to achieve multiple benefits (e.g., flood management, environmental, improved water use efficiency).

The lands proposed to receive surface water within the identified place of use in this Application primarily include lands that are presently cultivated or include lands not presently cultivated that are suitable for groundwater recharge or include lands that are presently serving as wildlife habitat. Based on the large area proposed under this Application to receive surface water for irrigation and other purposes, the Districts respectfully request that pursuant to CCR section 719, the Division accept provided mapping as sufficient to meet the requirements under CCR Section 715(d).

2. Conjunctive Use and Water Supply Reliability

The Districts have historically engaged in conjunctive use to manage water during droughts and in years where full surface water deliveries are not possible. Conjunctive use management involves making sure that each of these resources is used to the optimum benefit with the least amount of negative environmental and economic effects.

TID provides surface water through its rights on the Tuolumne River, storage at New Don Pedro, Turlock Lake, and its system of conveyance facilities. Lakes and reservoirs have the advantage of being able to store water in a short period of time, while providing flood control and hydroelectric generation.

The Turlock Subbasin aquifer supplies groundwater for the cities of Turlock, Ceres, Hughson, and South Modesto, other subbasin communities and private domestic and industrial uses. The Turlock Subbasin aquifer also supports thousands of acres of farmland. This aquifer has the ability to store large amounts of water indefinitely, without concerns of evaporation or sediment dislocation. The Turlock Subbasin aquifers have a significant amount of available storage, and in order to extract the water and later put it to beneficial use, the aquifer must be provided with surface water supplies. The development of irrigated agriculture in the eastern portion of the subbasin since the 1960s has resulted in a cone of depression as groundwater levels have declined up to 100 feet over time.

Throughout the normal growing season, the TID irrigation system supplies an average of over 300,000 acre-feet (AF) of recharge to the aquifers of the Turlock subbasin. During the winter in rainy years, many acre-feet of water travel through TID systems, the Tuolumne River, and neighboring sloughs unused. This excess high flow water can be used to recover lost groundwater storage in the aquifer by capturing

this water to pumping water back into the aquifer or providing additional area for the water to permeate down into the aquifer.

Active conjunctive use programs require the ability to capture surface water during high flows. In addition, it requires an understanding of where groundwater recharge is most effective. Turlock Subbasin Groundwater Sustainability Agency GSAs have developed a Groundwater Recharge Assessment Tool (GRAT) with the assistance of Sustainable Conservation and their partners, utilizing Proposition 68 grant funding, to enhance the existing conjunctive use programs by implementing a recharge program dedicated and on-farm recharge projects. The GRAT can be used to evaluate where water could be placed for recharge, when available. Future projects and infrastructure will can be included into the GRAT to increase the management potential. These facilities may include but are not limited to: stormwater basins for recharge, recharge from the canal system, dedicated recharge basins or other facilities, in addition to the on-farm recharge concept.

MID diverts water from the Tuolumne River for agricultural irrigation and municipal supply. The mean annual MID diversion from the Tuolumne River is approximately 294,000 AF, based on the average hydrologic period from 2003 to 2012. Approximately twenty percent of this amount (67,000 AF) is currently delivered to the Modesto Regional Water Treatment Plant (MRWTP) for treatment and delivery to the City of Modesto.

New Don Pedro Reservoir, built in 1971 and located northeast of La Grange in the Sierra Nevada foothills, is jointly owned by the Districts and has a maximum storage capacity of 2,030,000 AF. MID's share of water stored in New Don Pedro Reservoir is approximately 543,000 AF. La Grange Diversion Dam, constructed in 1893, is used to divert water from the Tuolumne River into the MID Upper Main Canal. Diversions flow through the Upper Main Canal to the Modesto Reservoir for temporary storage and irrigation deliveries and for delivery to the water treatment plant and then on to the City of Modesto. The Modesto Reservoir, owned and operated by MID, was built in 1911 and has a storage capacity of 28,000 AF. MID distributes Tuolumne River water and groundwater via a network of facilities, including 15 miles of unlined canals, 147 miles of lined canals, 42 miles of pipelines and 39 miles of drains. In 2012, approximately 66,500 acres of land were irrigated within MID, 57,000 acres of which received surface water from MID. MID pumps groundwater from approximately 100 production and drainage wells to supplement surface water supply and to help control the high water table in the western Subbasin. Groundwater pumping supplements reduced supply from the Tuolumne River during

consecutive dry years and to serve areas where it is more difficult to deliver adequate amounts of surface water.

The entire Modesto Subbasin (5-22.02) is designated a high-priority basin by the Department of Water Resources (DWR). The Modesto Subbasin covers about 245,253 acres in the northern San Joaquin Valley Groundwater Basin and is bounded by the Stanislaus River on the north, the Tuolumne River on the south, the San Joaquin River on the west and the Sierra Nevada Foothills on the east. The Modesto Subbasin relies on two primary sources of water supply – surface water from the Stanislaus and Tuolumne rivers and groundwater pumped from the Subbasin. The Modesto Subbasin supplies groundwater for the cities of Modesto, Oakdale, Riverbank, and Waterford, other subbasin communities and private domestic and industrial uses.

About 64 percent of the Modesto Subbasin is agricultural, with major crop types including almonds and other deciduous trees, corn, grains, pasture, vines, citrus and truck crops. Urban areas cover about 13 percent of the Subbasin. Remaining lands consist of non-agriculture, non-irrigated agriculture, undeveloped areas, and surface water (23 percent). Most of the undeveloped land is in the eastern portion of the Modesto Subbasin.

A significant expansion of irrigated agriculture occurred in the Subbasin during the early 1990's. In 1996, irrigated agriculture covered approximately 46 percent of the Subbasin (approximately 111,946 acres). Over the next 20 years, irrigated agriculture expanded by about 40 percent and by 2017 had added another 45,965 acres (total 157,911 acres, approximately 64 percent of the Subbasin). The increase in irrigated agriculture primarily resulted from a conversion of pasture to deciduous/almond orchards. Much of this expansion occurred in the eastern Subbasin – outside of MID service area – where groundwater is the primary source of water supply.

3. Instream Use for Fish and Wildlife

The Application will support the Districts' acquisition of water supply to support benefits for instream beneficial uses on the Tuolumne and San Joaquin Rivers. The instream uses may be in response to proposed regulations, in support of a voluntary settlement agreement, public trust requirements or other habitat programs developed by the Districts and regional partners. The following instream beneficial uses will be protected through the Application:

- Improve rearing conditions for juvenile salmonids
- Increase flows to facilitate or encourage fish migration

- Encourage riparian plant growth with wetted banks
- Increase flows to clean spawning gravels of fine sediments
- Create shallow water habitat
- Improve floodplain habitat
- Enable the Districts to dedicate instream flows and maintain water supply reliability through conjunctive use

The Application would allow for the diversion of surface water in high flow years, with storage of these flows in both the underground aquifer and off-stream storage facilities. The ability to later extract stored underground water and/or release stored surface water would support the dedication of an increased quantity of water to remain instream in dry year types; allowing conjunctive use to support instream flow dedication for fish and wildlife benefits.

4. Groundwater Sustainability

SGMA directs DWR to identify groundwater basins and subbasins in conditions of critical overdraft and to update the prioritization of those areas. The proposed place of use under this Application includes lands that are within portions of the Turlock and Modesto subbasins. DWR has identified the Turlock and Modesto subbasins as high-priority and therefore must develop a groundwater sustainability plans (GSP) to achieve sustainability by 2042. The purpose of this Application is to assist in achieving sustainability in these high-priority groundwater basins through 1) groundwater replenishment, 2) diverting and using surface water for groundwater recharge and extraction, and 3) in-lieu groundwater recharge through surface water deliveries, when available.

The Districts have been cooperatively working with neighboring groundwater sustainability agencies in both the Turlock and Modesto Subbasins in order to develop GSPs for the Turlock and Modesto groundwater subbasins. The Turlock Groundwater Subbasin and the Modesto Groundwater Subbasin will each submit GSPs to DWR by January 31, 2022. As further developed in the GSPs, there are several opportunities and tools to achieve sustainability under SGMA within the 20-year period following adoption of the GSPs. These opportunities and tools include the use of available surface water for groundwater replenishment and to reduce groundwater pumping.

The diversion and use of surface water under a permit issued for this Application, together with several other measures identified in the GSPs, will assist in achieving the sustainability goals addressed in the GSPs. In particular for the Turlock and Modesto subbasins, this includes avoiding undesirable results

under SGMA including declining groundwater levels, water quality, and depletion of interconnected surface water streams.

5. Specific Projects

5.1 Turlock Subbasin Groundwater Recharge, Storage and Reuse Projects

Recharge and groundwater banking for reuse in the future will take a variety of forms including, but not limited to direct recharge from basins or other dedicated recharge facilities, recharge through irrigation facilities, aquifer storage and recovery, in-lieu recharge, and on-farm recharge. The projects described below provide examples of some of the types of projects to be included.As noted above, the Turlock Subbasin aquifers have a significant amount of available storage, and in order to extract the water and later put it to beneficial use, the aquifer must be provided with surface water supplies. The development of irrigated agriculture in the eastern portion of the subbasin since the 1960s has resulted in a cone of depression as groundwater levels have declined up to 100 feet over time. The Turlock Subbasin GSP estimates a depletion of 1.6 million acre feet of groundwater in storage over the 25-years study period (1991-2015) with an average annual basin-wide groundwater overdraft of 65,000 AF. In the eastern portion of the Turlock subbasin, where very little surface water is available for farmland irrigation, average annual overdraft is approximately 180,000 AF. This cone of depression extends into in the Turlock Irrigation District's service area. Overdraft of groundwater can lead to wells drying up, significant reduction in water quality, and potential subsidence. Therefore, an important component of the Application is to use the available aquifer storage capacity in the Turlock subbasin to temporarily store water for future beneficial use. The FloodMAR program is a model for this concept.

The Turlock Subbasin GSAs have developed a Groundwater Recharge Assessment Tool (GRAT) to enhance the existing conjunctive use programs by implementing a recharge program utilizing a variety of dedicated and on-farm recharge projects. The GRAT will be used to evaluate where water could be placed for recharge, when available. Future projects and infrastructure will be included into the GRAT to increase the management potential.

5.1.1 On-Farm Recharge within TID

TID will work with growers within its irrigation service area to identify parcels that would be willing to participate in the On-Farm Recharge Project and have suitable conditions to support recharge. TID plans to utilize the GRAT to identify areas and fields within TID that are suitable for on-farm recharge projects, as determined based on cropping, soil characteristics, and other pertinent parameters considered in the

GRAT. An initial project that is evaluated and identified within the GSP, focused on non-permanent crops in areas on the eastern side of the TID, however, additional lands and crops will continue to be evaluated using the GRAT to maximize recharge when water is available.

The project will initially include participating fields that are projected to comprise 25 percent of non-permanent crop lands within TID's existing irrigation service area along canals and laterals downstream of Turlock Lake in the eastern portion of the Turlock Subbasin where the recharge potential is highest (including the Main Canal, Highline Canal, Turlock Main Canal, Upper Laterals, and Upper Stevinson). The initial on-farm recharge project is expected to apply, on average, approximately 2 AF per acre each year that the Project occurs, and that sufficient water will be available for this Project only in wet and above normal hydrologic years (approximately 50 percent of years historically). Subsequent analysis of water availability, actual annual application rates, application timing, and extent of participating lands will be necessary as Project development continues and implementation begins.

Surface water deliveries during the non-irrigation season are expected to provide direct groundwater recharge to the Subbasin. For fields that are irrigated using groundwater, surface water deliveries during the irrigation season are expected to offset groundwater demand and provide in-lieu groundwater recharge benefits. In both cases, the sustainability indicators expected to benefit from this Project are groundwater levels, groundwater storage, interconnected surface water, and land subsidence (depending on where recharge occurs). All benefits to sustainability indicators in the Turlock Subbasin will be evaluated through groundwater monitoring at nearby monitoring sites, identified in the GSP.

The TID on-farm recharge project is expected to provide direct or in-lieu recharge within the existing TID irrigation service area. The majority of communities in the Turlock Subbasin, particularly the TID irrigation service area, are classified as DACs, SDACs, or EDAs (according to 2018 census data, evaluated by place, tract, and block group). Depending on which specific parcels receive surface water deliveries, this Project may directly benefit specific DACs in the TID irrigation service area. In addition, maintenance or improvement of groundwater levels may help to protect beneficial groundwater use by rural domestic wells from potential adverse impacts related to chronic groundwater level decline. Benefits to groundwater conditions in the Turlock Subbasin are also expected to broadly benefit all DACs, SDACs, and EDAs in the Turlock Subbasin.

On average across all years, the initial on-farm recharge project is expected to provide approximately 4,000 AF/yr of recharge benefit to the Turlock Subbasin. The benefits would accrue in years with wet or

above normal hydrologic conditions when sufficient water is expected to be available for on-farm recharge (approximately 50 percent of years historically). In those years, approximately 8,000 AF/yr of groundwater recharge is expected to occur. This included a limited area, and water supply and was designed to develop the concept and program methodologies. The initial project will be expanded to include additional lands and crops within the TID service area, using the GRAT Tool, which is expected to significantly increase the recharge potential for the project.

5.1.2 Regulating Reservoirs

Regulating reservoirs are planned for the canal system to respond nimbly to operational fluctuations within the system, reduce spill, and improve water quality. Regulating reservoirs can also provide recharge and provide supplies for recharge facilities. During the non-irrigation season, flood flows can be conveyed through TID's canal system and stored in regulating reservoirs for use as supply water for adjacent groundwater recharge projects. In addition, regulating reservoirs can be used to wheel water within TID's system to supply recharge projects. For example, flood water can be stored in a regulating reservoir and used later to irrigate lands adjacent to the reservoir. That same volume of water can then be released from the La Grange Diversion Dam at a future date to supply water for groundwater recharge projects anywhere within TID's system. Two examples of regulating reservoirs, one that is shovel-ready and another in the design stage, that could be used for these purposes are described below.

5.1.2.1 Ceres Regulating Reservoir

TID will construct a new regulating reservoir in the TID distribution system, located along the Ceres Main Canal near the head of Lower Lateral 3. The reservoir, which is shovel-ready, would absorb operational fluctuations in the Ceres Main Canal caused by upstream flow adjustments and would maintain a constant pool elevation upstream of the drop where it is constructed. This reservoir is expected to provide numerous benefits to the operation of TID's distribution system and to the level of service offered to TID's irrigation customers, with cascading benefits to the Turlock Subbasin.

The proposed reservoir design would have an operational storage capacity of approximately 220 AF, a maximum storage capacity of 253 AF, and a design inflow/outflow capacity of 100 cubic feet per second (CFS). To facilitate reservoir operation, four existing in-canal level control structures, known as drop structures, would be modified and automated with new flume gates and telemetry.

5.1.2.2 Lateral 5 ½ Regulating Reservoir

The Application could support the construction of a new regulating reservoir on Lateral 5 1/2, with 140 AF of operating capacity. Water would be pumped to the reservoir from Harding Drain and would be pumped out to Lateral 5 1/2. The reservoir, which is currently in the design stage, may ~~also~~ help to reduce pumping along Lateral 5 1/2 that has historically occurred to compensate for limited surface water supplies stemming from capacity constraints. This Project may also benefit water quality, to the extent that surface water deliveries offset groundwater pumping requirements. The surface water supply for TID originates as snowmelt from the Sierra Nevada Mountains and is of very high quality with lower TDS relative to groundwater.

5.1.3 Delivery of Surface Water to Turlock Subbasin Areas Outside TID Service Area

TID promotes direct and in-lieu recharge through the provision of "replenishment water" to irrigators outside of, but adjacent to TID's irrigation service area. Historically, the bulk of the replenishment water sales have gone to irrigators east of TID's irrigation service area as a substitute for groundwater pumping or in-lieu groundwater recharge.

TID could deliver water to land within East Turlock Subbasin Groundwater Sustainability Agency (ETSGSA) in years when sufficient water supplies exist. Annual operation of this Project would be informed by the Tuolumne Reservoir Simulation (TRS) model, which TID currently uses to estimate the volume of surface water available each year.

Replenishment water deliveries will help maximize the utility of available water supplies to support groundwater sustainability in the Turlock Subbasin. During the irrigation season, replenishment water delivered could be used to offset demand for groundwater pumping and provide in-lieu recharge benefits to the Subbasin. During the non-irrigation season, water delivered would be used for field flooding to provide direct recharge benefits to the Subbasin. As with the TID on-farm recharge project, this project will benefit from the use of the Groundwater Recharge Assessment Tool (GRAT).

On average, irrigation season deliveries to parcels in the ETSGSA that have historically received replenishment water is expected to provide 3,400 acre-feet per year (AF/yr) of benefit to the Turlock Subbasin. These benefits are expected to accrue in years with wet or above normal hydrologic conditions when the TID Board of Directors allows deliveries to these areas. Non-irrigation season replenishment water deliveries are expected to provide an average of 1,600 AF/yr of additional benefit to the Turlock Subbasin.

With the use of the GRAT and enabling access for additional lands to receive deliveries from the TID system, it is anticipated that significantly more lands could benefit from replenishment water in both the irrigation and non-irrigation season. This would provide important replenishment opportunities for areas of the subbasin that rely entirely on groundwater for supply. As is evaluated in the GSP, these areas are pumping more than is replenished, causing overdrafted conditions. As a result, the GSP identifies up to 25 percent of the currently cropped areas within the ETSGSA may be subject to fallowing or land repurposing if projects like this are not able to be expanded to increase the replenishment and offset the need for reducing pumping to achieve sustainability within the subbasin.

5.1.4 Recharge from TID's Conveyance Facilities Upstream of Turlock Lake

The La Grange recharge project would develop recharge opportunities in the La Grange area, upstream of Turlock Lake and within TID's existing irrigation service area. Recharge could include on-farm and dedicated recharge facilities. Recharge opportunities would focus on areas where the recharge potential is found to be high. In addition to the recharge projects described here, having water in the canal system for a longer duration will result in additional seepage and recharge from the canal system itself.

5.1.5 Recharge from TID's Conveyance Facilities Downstream of Turlock Lake

In the TID conveyance system, there are new recharge opportunities downstream of Turlock Lake where the recharge potential is found to be high. This Project is envisioned to occur in areas downstream of Turlock Lake, potentially within or outside the existing TID irrigation service area that can be served by existing TID facilities. In addition to the recharge from dedicated facilities described here, having water in the canal system for a longer duration will result in additional seepage and recharge from the canal system itself.

Water could be diverted into existing open channels in the eastern portion of TID to facilitate direct recharge during the non-irrigation season. Subsequent analysis is necessary as project development continues to identify potential infiltration rates and to identify additional recharge opportunities (recharge basins, aquifer storage and recovery (ASR), dry wells, in-lieu recharge, etc.).

Water proposed for diversion under the Application may be stored in the aquifer through dedicated recharge wells and/or recharge basins for recovery later for beneficial uses. The wells can be designed as Aquifer Storage and Recovery (ASR) to be used for both recharge and recovery, or the wells may be just dedicated recharge wells with the recovery of recharged water to occur at the existing agricultural irrigation wells. The project can be designed to install recharge wells or basins near the irrigation

outlets. Substantial acres currently have suitable facilities to effectively deliver water for irrigation and to recharge wells. Recharge could be implemented through ponds, dry wells located off of canals, and other facilities with deliveries from the canal system. Additional acreage and facilities may require a certain amount of modernization and rehabilitation to facilitate this potential use. Recharge rate/capacity needs to be investigated further, but current estimates are approximately 2 cfs for ASR, or 0.5 to 1 AF/day for recharge ponds.

In-lieu recharge would be a component of this project. Having water in the canal system during the non-irrigation season will also enable flows to be utilized for frost protection as needed for crops where groundwater would have otherwise been used. In addition, some growers within TID use groundwater for their drip and micro irrigation systems out of convenience. Importantly, most growers have retained their flood systems, and continue to take irrigation deliveries for cultural practices. Programs will be developed to increase the use of surface water in-lieu of groundwater within the TID's boundaries to maximize the use of surface water and recharge when available, and to retain and increase groundwater supplies for recovery later, when surface water supplies are not available. This could be building small ponds for drip and micro systems to pull from for irrigation, or it could be encouraging drip and micro systems to take more flood deliveries for irrigation. Irrigation ponds may also provide recharge opportunities.

5.1.6 Urban Storm Drain Basin Recharge Projects

Stormwater basins are connected to the canal system to enable stormwater flows to be conveyed to the canals. This connection allows for the potential use of the storm drain basins to be utilized to recharge groundwater in urban areas.

For example, the Dianne Basin is one of the largest stormwater basins in the Turlock Subbasin. The Dianne Storm Drain basin is located on the western edge of the City of Turlock, north of the Turlock wastewater treatment plant, on West Canal Drive. The basin is 26 acres and can hold 105 AF of water.

The Dianne Storm Drain basin receives storm water from Fulkerth Road which includes roughly a third of the storm water captured in the City of Turlock. There is potential to supplement the water in the basin with surface water in TID's distribution network for additional aquifer recharge.

Once the basin reaches approximately 75% to 80% of capacity, as it is currently configured, water is pumped out of the basin into TID's Lateral #4 for conveyance to the river. This Project could upgrade the Dianne Storm Drain basin to expand the capacity of the basin and/or install ASR wells. Both approaches

would enhance the volume of water that can recharge into the aquifer at this location. Additionally, it could alleviate stress on the storm drain system.

The stormwater basin could be utilized as a recharge project where high flood flows could be captured, held, and recharged into the aquifer for later extraction and use.

5.1.7 Infiltration Galleries 1 and 2

The Districts are proposing to operate two in-river infiltration galleries (IGs) at approximately RM 25.9 just downstream of Fox Grove Park on the lower Tuolumne River. IG-1, which has a flow capacity of 100 cfs, was previously installed by TID in 2001 during the restoration of Special-run Pool-9 (SRP-9) at RM 25.8 located below the Geer Road Bridge. IG-2 would be installed just upstream of IG-1 with a flow capacity of 125 cfs. Both IGs would be connected to pump stations located on the south bank of the river. Water withdrawn at the IGs would become part of the Districts' water supplies by being transported to TID's Ceres Main Canal or other non-Project facility.

5.2 Turlock Lake Recharge, Storage, and Reuse Project

Turlock Lake is an existing regulating reservoir in TID's irrigation system that supports both water and power operations. Surface water is diverted at La Grange Diversion Dam and flows through TID' Upper Main Canal to Turlock Lake where the water is stored and later released into TID's Main Canal for irrigation and power generation purposes downstream.

The lake has historically been operated at a water surface elevation between 220.0 and 237.0 feet above mean sea level (ft AMSL), corresponding to between 5,000 and 34,400 acre-feet (AF) of storage capacity. At maximum, Turlock Lake is certified by the California Division of Dam Safety for operation up to 240.6 ft AMSL during much of the year, which would allow a total storage capacity of up to 45,600 AF. Traditionally, the lake has been operated to minimize percolation while satisfying other operational objectives, with a typical summer target storage of 32,000 AF and a winter target of about 15,000 AF.

The lake has non-linear percolation characteristics, providing a higher rate of percolation following increases in the lake stage that is attributed to increasing wetted area and increasing soil permeability as the lake stage rises. As such, TID is exploring the concept of re-operating Turlock Lake with a modified objective to provide groundwater recharge to the Turlock Subbasin for later extraction to support a variety of beneficial uses. Specifically, TID is exploring alternative lake operations strategies that would intentionally operate the lake at higher stages during the irrigation and non-irrigation seasons, known as recharge mode, using surface water supplies identified in this application. Preliminary analysis shows

potential to recharge 50,000 AF/yr when operating the lake in recharge mode. This project also includes installation of new groundwater pumps to extract the stored groundwater for discharge into TID's Main Canal for irrigation and other beneficial uses.

5.3 Don Pedro Enlargement Project

Enlarging Don Pedro Reservoir for the purpose of the additional storage would be to provide supplemental reservoir capacity to store streamflow from the lower Tuolumne River in high runoff years for subsequent use during droughts. The proposed enlargement would store additional water to be used to: (1) Improve the drought security of irrigation diversions from the Tuolumne River which have been adversely affected by FERC mandated increases in instream flow releases from Don Pedro Reservoir as a result of the 1995 FERC settlement; and (2) Mitigate potential water supply impacts of any future increases in downstream releases from Don Pedro Reservoir for environmental protection and restoration uses in the lower Tuolumne River.

Assumptions being used to develop this project includes modifying Don Pedro to enable an additional 105,722 AF of water to be available for conservation purposes. Water that would otherwise be released as flood flows would be captured in the months of April and May. There are 49 out of the 110 years (historically) where there is over 100,000 AF that can be captured for this purpose. The water captured could be used for instream flows, irrigation, recreational uses, and groundwater storage for later recovery. The project would also provide additional power generation, by enabling more time available to make releases on peak as opposed to round the clock generation. Greater hydraulic head also helps to improve power plant efficiency.

5.4 Don Pedro - New Melones Intertie

The ability to move water between the Stanislaus River and the Tuolumne River at locations higher in the watersheds would provide greater operational flexibility to all the participating agencies. A previous study evaluated two alternative conveyance routes from New Melones Reservoir to Don Pedro Reservoir for that purpose.

The Alternatives evaluated to date include the following:

1. A pumped pipeline using a 60-inch diameter conveyance pipe running approximately 10,000 feet, 3,200 feet of it bored under Table Mountain. At the pipeline terminus the water would be discharged to a tributary which would then be used to convey the flow to Don Pedro.

2. A gravity tunnel 8-15 feet in diameter, 17,000 feet in length discharging to a tributary which would then be used to convey the flow to Don Pedro.

The Districts, in coordination with regional partners, plan to evaluate additional opportunities to construct facilities that can convey water in both directions between the two reservoirs.

5.5 Cardoza Ridge Off-Stream Storage Reservoir

LOCATION

The Cardoza Ridge Reservoir site is located on McDonald Creek, a tributary on the south bank of the Tuolumne River that joins the river near La Grange California. The reservoir site is about 1 mile southeast of La Grange Diversion Dam and 2 miles south of Don Pedro Reservoir. Road Access to the reservoir site is by County Road J-59 travelling south from State Highway 132 at La Grange.

RESERVOIR

Site topography could accommodate a reservoir up to about the El. 700 contour. Storage volumes at various reservoir levels are shown in the following table:

Cardoza Reservoir Surface Area & Capacity

Reservoir Water Surface Elevation (Ft)	Surface Area (Ac)	Storage Capacity (AF)
700	3630	503,200
650	3240	332,100
600	2700	182,900
550	1730	70,000
500	590	14,900
415	0	0

Two reservoir levels were selected for evaluation and comparison: El. 700 which is the maximum practical size, and El. 600 which was the size previously investigated in 1990. For either capacity alternative, State Highway 132, which parallels McDonald Creek through the reservoir area, would have to be relocated along the southwest shoreline.

DAMS

The reservoir would be created by the main dam constructed on McDonald Creek, where the streambed level is approximately at El. 415. A saddle dam would be required at the southeast end of the reservoir for water levels above approximately El. 560, corresponding to a storage capacity of about 100,000 acre-feet. Both dams would be zoned earth or rock fill embankment construction using locally available material.

INLET WORKS, OUTLET WORKS AND CANAL

The source of water for the Cardoza Ridge off-stream storage facility would be through an open water conveyance system from Don Pedro Reservoir. The conveyance would be designed for a maximum capacity of 5,000 cfs. It would have a total length of about 21,400 ft. and would consist of the following components listed from upstream to downstream:

- An intake control structure at Don Pedro Reservoir about 2000 ft. east of Don Pedro Dam,
- An approximately 4800 ft. long section of canal from the intake,
- A 1600 ft, long siphon across a gully,
- A 1300 ft, length of tunnel,
- Another section of canal about 12,600 ft. long, and
- A 1100 ft. long chute to carry water from the high level canal down into Cardoza Ridge Reservoir.

The outlet conveyance would be designed to release reservoir water directly into McDonald Creek. The stream channel would be improved to convey the released water to the TID Main Canal. The facility would consist of an intake structure, an outlet conduit embedded in concrete in the dam foundation, a stilling basin energy dissipater, and the improved stream channel.

5.6 Montgomery Off-Stream Storage Reservoir

LOCATION

The Montgomery Reservoir site is located on Dry Creek in the Merced River basin 1 mile northwest of Snelling and about 5 miles southeast of Turlock Lake. Road access to the site is via County Road J-59 either by travelling south from State Highway 132 at La Grange or north from State Highway 59 near Snelling.

RESERVOIR

Site topography could accommodate a reservoir up to about the El. 350 contour, although a number of saddle dams would be required along the west and south sides of the reservoir. Storage volumes at various reservoir levels are shown in the following table:

Montgomery Reservoir Surface Area and Capacity

Reservoir Water Surface Elevation (Ft)	Surface Area (Ac)	Storage Capacity (AF)
350	12,500	517,000
325	7,670	265,400
300	4,420	114,300
220	0	0

Two reservoir levels were selected for evaluation and comparison: El. 350 which is considered the maximum practical size, and El. 325 which was previously investigated.

DAMS

The reservoir would be created by the main dam constructed on Dry Creek, where the streambed level is approximately at El. 220. Depending on the reservoir level, a number of low saddle dams would be required around the reservoir rim. The main dam and the saddle dams would be zoned earth or rock fill embankment construction using locally available materials.

INLET WORKS, OUTLET WORKS AND CANAL

The source of water for the Montgomery Reservoir off-stream storage facility would be through a water conveyance system from Don Pedro Reservoir. The conveyance facility would be a sidehill canal with some short lengths of tunnel. It would have a capacity of 5000 cfs and would have a total length of about 10.6 miles.

The upstream 3.8 miles would follow the same route and be identical to the import conveyance facility previously described for Cardoza Off-Stream Reservoir. A further canal and lined channel extension of about 6.8 miles would be required to reach Montgomery Reservoir.

The outlet conveyance would be designed to release reservoir water into a canal leading to Turlock Lake. The facility would consist of an intake structure, an outlet conduit embedded in concrete in the dam foundation, a stilling basin energy dissipater, and a 6 mile long canal.

There is also a potential important positive groundwater recharge impact of Montgomery Reservoir as well as potential beneficial impact to the groundwater surface water interaction at the Merced River. Montgomery Reservoir would be constructed on geologic formations found at TID's existing reservoir, Turlock Lake: the sediments of the Mehrten and Modesto Formations. Seepage rates are anticipated to be similar that those found at Turlock Lake; this means that, due to the local groundwater gradient, seepage will migrate towards the Merced River. It is estimated that once equilibrium is reached, annual sustained recharge from Montgomery Reservoir will be 12 AF per acre of surface area. Initial rates of seepage are expected to be much higher.

5.7 Regional Drinking Water Project

Turlock Irrigation District will begin providing surface water to the Stanislaus Regional Water Authority in 2023 when a new regional drinking water project comes online. In the first phase of the project, TID will provide up to 15,000 AF/yr to the SRWA who will treat the water to drinking water standards and provide it to the Cities of Ceres and Turlock who will use the treated surface water conjunctively with groundwater. As the Cities' demand for drinking water increases and/or groundwater quality continues to worsen, the current SRWA project has a planned expansion to 30,000 AF/yr, overtime this projected demand may increase to 50,000 AF/yr.

A provision in the Water Sales Agreement between TID and the SRWA is that during drier years, the allotment to the SRWA is reduced in an amount similar to any reduction in water to the TID's growers. A groundwater banking program for drinking water customers would provide an opportunity to store water in wetter years to overcome cutbacks in drinking water supply in drier years. Turlock and Ceres will provide a blend of surface water and groundwater to their drinking water customers. Augmenting the aquifer below those two communities will ensure that groundwater is available in years when surface water supplies are reduced.

The SRWA has committed to providing water to other communities in the region who may need to augment their drinking water supplies with treated surface water that complies with all state and federal drinking water standards. Other Public Water Systems in the region are entirely dependent upon groundwater which is a diminishing supply of worsening quality. Common drinking water contaminants in the region include, but are not limited to: arsenic, nitrates, PCE, TCP, and Chromium-6.

The SRWA has had exploratory conversation with other regional public water agencies, some of whom are Disadvantaged Communities (DACs). Therefore, a more reliable supply of treated surface water or groundwater recharge with high quality surface water could augment drinking water supplies in the region, consistent with the State of California's legislation recognition of the Human Right to Water in AB 651 of 2012.

5.8 MID Surface Water Reliability and Conjunctive Use

Increased diversions to storage in Don Pedro Reservoir and Modesto Reservoir as a result of space made available by increased hydrologic volatility caused by climate change. Such water will then be delivered for irrigation within MID, for M & I use within the City of Modesto, or potentially to out-of-district areas.

Additional storage facilities or opportunities may be pursued, including but not limited to enlarging Don Pedro, expanding the size of Modesto Reservoir, and the construction of additional regulating reservoirs.

5.9 MID Tuolumne River Flood Mitigation and Direct Recharge Project

The Tuolumne River Flood Mitigation and Direct Recharge Project (Project) is intended to be a cooperative long-term project between Modesto Irrigation District (MID) and the non-district east landowners and is designed to be implemented with no impacts to MID's existing agricultural and urban customers. Currently developed agriculture in the non-district east areas of the Modesto subbasin is estimated to be approximately 36,000 acres, of which approximately 30,000 acres is deciduous fruits and nuts (permanent crops). With limited exception, the entire non-district east area is solely reliant on groundwater from the Modesto subbasin. The Project is different than the Modesto Irrigation District In-lieu and Direct Recharge Project, namely from a timing perspective, and involves the delivery of approximately 20,000 AF of surface water from the Tuolumne River in Wet and Above Normal water years (WYs) through a limited number of new points of diversions off MID's existing irrigation conveyance infrastructure and subsequent conveyance through newly constructed private irrigation conveyance infrastructure for storage and direct recharge during the non-growing season. Historically (1972-2020), Wet and Above Normal WYs have occurred approximately 47% of the time on the Tuolumne River. In addition to measurable benefits to groundwater resources within the Modesto subbasin, this Project is intended to mitigate flood releases from Don Pedro Reservoir during the winter months whereby reducing impacts on the lower Tuolumne River (City of Modesto and growers near the confluence of the lower Tuolumne River and the San Joaquin River), the San Joaquin River and the Delta. Under the current Final Environmental Impact Statement for the relicensing of Don Pedro Reservoir,

there is estimated to be approximately 1,500,000 AF of surface water in Wet WYs and 620,000 AF of surface water in Above Normal WYs in the Tuolumne River above and beyond that necessary to meeting existing customer demands and the recommended instream flow obligations. As a result, 20,000 AF of Tuolumne River surface water to applicable non-district east areas during the non-growing season amounts to approximately 1% and 3% of available surface water supply respectively, for Wet and Above Normal WYs.

Surface water deliveries during the non-irrigation season are expected to provide direct groundwater recharge to the Subbasin. For fields that are irrigated using groundwater, surface water deliveries during the irrigation season are expected to offset groundwater demand and provide groundwater recharge benefits. In both cases, the sustainability indicators expected to benefit from this Project are groundwater levels, groundwater storage, interconnected surface water, and land subsidence (depending on where recharge occurs). All benefits to sustainability indicators in the Modesto Subbasin will be evaluated through groundwater monitoring at nearby monitoring sites, identified in the GSP.

5.10 MID In-lieu and Direct Recharge Project

The Project is intended to be a cooperative long-term project between Modesto Irrigation District (MID) and the non-district east landowners. It is designed to ensure groundwater sustainability in non-district east areas by being:

- Implemented with no impacts to MID's existing agricultural and urban customers
- Operated in tandem with the Oakdale Irrigation District In-lieu and Direct Recharge Project

Currently developed agriculture in the non-district east areas of the Modesto subbasin is estimated to be approximately 36,000 acres, of which approximately 30,000 acres is deciduous fruits and nuts (permanent crops). With limited exception, the entire non-district east area is solely reliant on groundwater from the Modesto subbasin. The Project involves the delivery of approximately 60,000 AF of surface water from the Tuolumne River in Wet and Above Normal water years (WYs) through a limited number of new points of diversions off MID's existing irrigation conveyance infrastructure and subsequent conveyance through newly constructed private irrigation conveyance infrastructure for in-lieu and direct recharge during the growing season. Historically (1972-2020), Wet and Above Normal WYs have occurred approximately 47% of the time on the Tuolumne River. Under the current Final Environmental Impact Statement for the relicensing of Don Pedro Reservoir, there is estimated to be approximately 1,500,000 AF of surface water in Wet WYs and 620,000 AF of surface water in Above

Normal WYs in the Tuolumne River above and beyond that necessary to meeting existing customer demands and the recommended instream flow obligations. As a result, 60,000 AF of Tuolumne River surface water to applicable non-district east areas amounts to approximately 4% and 10% of available surface water supply respectively, for Wet and Above Normal WYs. Project operation in tandem with the Oakdale Irrigation District In-lieu and Direct Recharge Project is intended to ensure surface water delivery to applicable non-district east areas in most WYs.

Surface water deliveries during the non-irrigation season are expected to provide direct groundwater recharge to the Subbasin. For fields that are irrigated using groundwater, surface water deliveries during the irrigation season are expected to offset groundwater demand and provide in-lieu groundwater recharge benefits. In both cases, the sustainability indicators expected to benefit from this Project are groundwater levels, groundwater storage, interconnected surface water, and land subsidence (depending on where recharge occurs). All benefits to sustainability indicators in the Modesto Subbasin will be evaluated through groundwater monitoring at nearby monitoring sites, identified in the GSP.

5.11 MID FloodMAR

This project would support the development of flood managed aquifer recharge (FloodMAR) activities in locations in the Modesto Irrigation District boundaries where storm flows are available, or where existing surface water facilities can be utilized to direct and control surface water for various beneficial uses. Components of this Project would be developed privately or as coordinated efforts. Necessary infrastructure would be installed to connect existing delivery systems to FloodMAR activities.

5.12 Modesto Subbasin Groundwater Banking Project

These projects would focus on providing surface water for direct and in-lieu recharge. Water would be made available during Wet and Above Normal water year types through existing conveyance facilities.

5.12.1 MID On-Farm Recharge

This project would apply water on-farm during the non-irrigation season to support recharge within MID. The on-farm recharge project is expected to provide direct or in-lieu recharge within the existing MID irrigation service area.

5.13 MID Lower Cooperstown Off-Stream Reservoir

Located on Dry Creek and with a capacity of 192,000 AF, this reservoir will capture and store seasonal flows in wet and above normal year types. A 90-foot-high earth filled embankment will form the reservoir, with a service and auxiliary spillway to pass the probable maximum flood. The site was studied by the USBR in 1949, by MID in 1961, and by MID/TID in 1990.

LOCATION

The Lower Cooperstown Reservoir would be created by constructing a dam on Dry Creek just west of Modesto Reservoir which is located approximately 6 miles east of the City of Waterford.

RESERVOIR

At a normal maximum pool elevation of 210 feet, the dam would impound a reservoir with a storage capacity of 192,000 AF.

There is also a potential important positive groundwater recharge impact of Lower Cooperstown Reservoir as well as potential beneficial impact to the groundwater surface water interaction at the Tuolumne River. Lower Cooperstown Reservoir would be constructed on geologic formations found at MID's existing reservoir, Modesto Reservoir: the alluvium of the Mehrten and Modesto Formations. It is estimated that annual sustained recharge from Lower Cooperstown Reservoir will be 10.5 AF per acre of surface area. Initial rates of seepage are expected to be much higher. Depending on reservoir levels, seepage would be in the range of 74-107 TAF.

DAMS

The main dam would be approximately 6,300 feet long with a maximum height of approximately 90 feet above the streambed of Dry Creek. Total required embankment volume is estimated to be about 1,915,000 cubic yards. A number of smaller dikes would be necessary to fully contain the reservoir at the planned elevation.

INLET WORKS, OUTLET WORKS AND CANAL

Conveyance to the reservoir could be from the existing MID Main Canal which has a capacity of 2,000 cfs or through an enlarged MID Main Canal with a capacity of 4,000 cfs.

Once water is stored in Lower Cooperstown, water must be released from the reservoir for various purposes. The outlet must provide releases back into Dry Creek, release water from the reservoir during an emergency, and convey stored water to the MID Main Canal for farmland irrigation purposes.

Flow releases to Dry Creek would be up to 30 cfs and could be conveyed via a concrete encased steel pipeline of approximately 24 inches in diameter.

An analysis of reservoir operations indicate that the outlet facilities should have a discharge rate of approximately 1,000 cfs at a head of five (5) feet. The most likely outlet conveyance system is a canal of

approximately 4.5 miles in length to the outskirts of the City of Waterford. At this location, the canal operating surface is low enough to drain Lower Cooperstown. The MID Main Canal near Lower Cooperstown, on the other hand, limits the draining of the new reservoir via gravity.

5.14 MID Upper Cooperstown Off-Stream Reservoir

Located on Dry Creek and with a capacity of 110,000 AF, this reservoir will capture and store seasonal flows in wet and above normal year types. A 100-foot-high earth filled embankment will form the reservoir, with a service and auxiliary spillway to pass the probable maximum flood. The site was studied by the USBR in 1944, by MID in 1961, and by the Districts in 1990.

LOCATION

In terms of storage capacity, the Upper Cooperstown Reservoir would be smaller than Lower Cooperstown. It would be created by constructing a dam on Dry Creek just north of Modesto Reservoir which is located approximately 6 miles east of the City of Waterford.

RESERVOIR

At a normal maximum pool elevation of 243 feet, the dam would impound a reservoir with a storage capacity of approximately 110,000 AF.

Like Lower Cooperstown, there is also a potential important positive groundwater recharge impact of Upper Cooperstown Reservoir as well as potential beneficial impact to the groundwater surface water interaction at the Tuolumne River. Upper Cooperstown Reservoir would be constructed on geologic formations found at MID's existing reservoir, Modesto Reservoir: the alluvium of the Mehrten and Modesto Formations. It is estimated that annual sustained recharge from Upper Cooperstown Reservoir will be 9 AF per acre of surface area. Initial rates of seepage are expected to be much higher. Depending on reservoir levels, seepage would be in the range of 42-64 TAF.

DAMS

The proposed main dam would have a similar section to that described for Lower Cooperstown. The dam would be approximately 3,000 feet in length with a maximum height of approximately 100 feet above the streambed of Dry Creek. A number of smaller dikes would be necessary to fully contain the reservoir at the planned elevation.

INLET WORKS, OUTLET WORKS AND CANAL

Like Lower Cooperstown, conveyance to the reservoir could be from the existing MID Main Canal which has a capacity of 2,000 cfs or through an enlarged MID Main Canal with a capacity of 4,000 cfs. A conduit from the Main Canal to Dry Creek would have a diameter of 10 feet and be constructed of reinforced concrete. This conduit would empty into Dry Creek, thence into the Upper Cooperstown Reservoir.

Once water is stored in Upper Cooperstown, it would be released into the existing Modesto Reservoir via a concrete lined canal of approximately two miles in length with a capacity of 900 cfs.

5.15 Roberts Ferry Off-Stream Reservoir Project

Located on lands south of the MID Main Canal and Modesto Reservoir with a capacity of 16,000 AF, this reservoir will capture and store seasonal flows in wet and above normal year types. A 75-foot-high earth filled embankment will form the reservoir, with a service and auxiliary spillway to pass the probable maximum flood. The site was studied by the MID in 1961, and by the Districts in 1990.

LOCATION

In terms of storage capacity, the Roberts Reservoir would be used to supplement Modesto Reservoir storage. It would be created by constructing a dam on a minor tributary to the Tuolumne River just south of Modesto Reservoir which is located approximately 6 miles east of the City of Waterford.

RESERVOIR

At a normal maximum pool the dam would impound a reservoir with a storage capacity of approximately 16,000 AF.

There is also a potential important positive groundwater recharge impact as well as potential beneficial impact to the groundwater surface water interaction at the Tuolumne River. Roberts Ferry Reservoir would be constructed on geologic formations found at MID's existing reservoir, Modesto Reservoir: the alluvium of the Mehrten and Modesto Formations.

DAMS

The proposed main dam would be earth-fill embankment with a maximum height of approximately 75 feet above the streambed. A number of smaller dikes would be necessary to fully contain the reservoir at the planned elevation.

5.16 Flood Risk Management

Flood risk management seeks to reduce the risk from flood events to people and property located in flood prone areas by using either structural and/or non-structural means. Regional flood control studies involving the Tuolumne River indicate that the most significant flooding occurs in the low-lying areas throughout Stanislaus County, many of which are disadvantaged communities. Notably, these studies indicate that flooding in some of the disadvantaged communities first occurs when Tuolumne River flows reach 9,000 cfs, and then impact more disadvantaged communities in San Joaquin County as flows in the Tuolumne and San Joaquin Rivers increase. The diversion of substantial quantities of surface water in high flow years to the large surface water storage projects identified in this Application would represent significant flood risk mitigation measures, especially for the low-lying disadvantaged communities in Stanislaus and San Joaquin Counties.

ATTACHMENT 2

PURPOSES OF USE, DIVERSION/STORAGE AMOUNT AND SEASON

Contents

The Districts' current and proposed surface water diversions are principally for irrigation, municipal and industrial supply, and replenishment of groundwater for extraction. This Application proposes to align the purposes of use with the Districts' existing water rights as well as to include purposes of use associated with underground storage and extraction. The Districts are currently working on filling out the Underground Storage Supplement Form.

1. Proposed Purposes of Use:

- Groundwater Recharge (GWR) for purpose of future extraction
- Agricultural Supply (AGR)
- Municipal & Domestic Supply (MUN)
- Industrial Service Supply (IND)
- Water Quality
- Non-Contact Water Recreation (REC-2)
- Spawning, Reproduction and/or Early Development (SPWN)
- Frost Protection
- Incidental Power Generation
- Off-stream Storage (Surface)
- Instream Storage
- Flood Risk Management

2. Proposed Direct Diversion Collection to Storage:

The following are the proposed rates and quantities for direct diversion and collection to groundwater and/or surface storage. Attachment 4 to this Application provides information regarding water availability, which may be helpful to assess the potential rates and quantities that may be available from each source identified in the Application. The Districts' existing and proposed infrastructure provide flexibility for the diversion, conveyance, and use of water with vast portions of the proposed place of use for multiple purposes of use. In addition, the surface water recharged into the groundwater system for later extraction may be diverted and used for multiple purposes, depending upon water supply needs and other factors, such as those identified in Attachment No. 1 and in Table 1 below. For these reasons, the proposed rates and quantities for direct diversion and collection to storage are identified in aggregate under this Application.

Below are the proposed rates and quantities for this Application:

TABLE 1
PROPOSED DIVERSION RATES

Agency	Facility	Purpose of Diversion	Rate (CFS)
TID	Enlarge TID's existing La Grange diversion structure	Supply for existing water rights, new recharge projects, Dickenson Off-Stream Reservoir	5,000
TID/MID	Existing Infiltration Gallery 1 and Future Infiltration Gallery 2	New recharge and reservoir projects	225
TID/MID	Future diversion structure at Don Pedro	Supply for Montgomery Off-Stream Reservoir	5,000
TID/MID	Future diversion structure at Don Pedro	Supply for Cardoza Ridge Off-Stream Reservoir	5,000
Multiple	Future diversion structure at Don Pedro	Supply for Don Pedro - New Melones intertie	5,000
MID	Enlarge MID's existing La Grange diversion structure	Supply for existing water rights, new recharge projects, Upper & Lower Cooperstown, Roberts Ferry Off Stream Reservoirs	4,000
		Grand Total:	**24,225**

All diversion rates shown in the above Table 1 are approximate. The combined diversion rates from all sources are approximately 24,225 cfs.

3. Season of Diversion

The proposed season of diversion from the Tuolumne River is from November 1 to June 14.

4. Project Categories and Quantities

The Application would support two overall categories of actions and individual projects using existing and/or new facilities to support groundwater and surface storage for multiple purposes of use as follows:

1) Groundwater Recharge, Storage and Reuse Projects

This category consists of a variety of projects including land application using primarily existing irrigation infrastructure to apply surface water to existing agricultural lands well suited to support recharge; existing and proposed basins, including but not limited to dedicated recharge basins, stormwater basins and/or storage ponds and the use of existing facilities (e.g., TID and/or MID canals) to support groundwater recharge; and in-lieu projects focused on using surface water in-lieu of current groundwater pumping.

2) Additional Surface Water Storage and Reuse Projects

This category consists of large off-stream reservoirs to store surface water to support Districts' operations, maximizing operation of existing facilities, and connecting existing facilities across the region.

Table 2 below identifies the various projects and their quantities:

TABLE 2
PROJECT QUANTITIES

CATEGORY	PROJECTS	IMPLEMENTING AGENCY	QUANTITY (AF)
Groundwater Recharge, Storage and Reuse Projects			
	Turlock Subbasin Groundwater Recharge, Storage, and Reuse Projects; and Projects Supplied by Infiltration Galleries	Multiple [(a)]	800,000
	Modesto Subbasin Groundwater Banking Project	MID	400,000
	Turlock Lake Recharge, Storage, and Reuse Project	TID	50,000
	Tuolumne River Flood Mitigation and Direct Recharge Project	MID	20,000
	Modesto Irrigation District In-lieu and Direct Recharge Project	MID	60,000
	MID FloodMAR	MID	20,000
	Regional Drinking Water Project	Multiple [(b)]	50,000
		subtotal:	**1,400,000**
Additional Surface Water Storage and Reuse Projects			
	Montgomery Off-Stream Storage Reservoir	TID/MID	517,000
	Cardoza Ridge Off-Stream Storage Reservoir	TID/MID	503,000
	Dickenson Off-Stream Reservoir	TID	104,000
	Don Pedro Enlargement Project	TID/MID	99,000
	Upper Cooperstown Off-Stream Reservoir	MID	110,000
	Lower Cooperstown Off-Stream Reservoir	MID	192,000
	Roberts Ferry Off-Stream Reservoir	MID	16,000
	MID Surface Water Reliability and Conjunctive Use	MID	20,000
	Don Pedro - New Melones Intertie	Multiple [(c)]	500,000
		subtotal:	**2,061,000**
		Grand Total:	**3,461,000**

Notes:

(a) West Turlock and East Turlock Groundwater Sustainability Agencies, TID, MID

(b) Stanislaus Regional Water Authority, TID

(c) Regional Partners

Total of up to 3.46 million acre-feet (MAF) per year by direct diversion and/or collection to storage (including underground storage) from all sources listed in Table 2 above.

ATTACHMENT 3

SOURCE OF WATER AND POINTS OF DIVERSION

Contents

1. Source of Water

The 150-mile-long Tuolumne River begins at the confluence of the Dana Fork and the Lyell Fork in the Tuolumne Meadows area of Yosemite National Park. After traversing nearly 8,600 feet of elevation drop, the Tuolumne River flows into the San Joaquin River in the Central Valley region of California. The Tuolumne's route initially passes through high mountain valleys and deeply incised canyons, then through the foothills of the Sierra Mountains, thence out into and through the eastern side of the low-lying Central Valley. The 1,960-square-mile watershed can be subdivided into three river reaches—the upper Tuolumne River above roughly river mile (RM) 80, the foothills reach between RM 54 and 80, and the valley reach from the mouth to RM 54.

1.1. Tuolumne River Shed

1.1.1. Upper Tuolumne River

The upper Tuolumne River watershed, the subbasin above about RM 80, covers approximately 1,300 square miles of drainage area and contains all the major tributaries of the Tuolumne River, including the North Fork, South Fork, Middle Tuolumne, Clavey River, Cherry Creek, and Eleanor Creek. The upper Tuolumne River extends from the confluence of the Dana and Lyell Forks to just below the confluence of the North Fork at approximate elevation 850 feet. The average gradient of the river is roughly 110 feet/mile (ft/mi), but local gradients vary greatly. The Upper Tuolumne is dominated by federal land ownership, primarily the Stanislaus National Forest and Yosemite National Park. The Tuolumne River from approximately RM 80 to its source is a designated National Wild and Scenic River, except for an 8-mile stretch at Hetch Hetchy Reservoir. Land development in the upper Tuolumne River subbasin is largely limited to small communities (e.g., Groveland and Smith Station) and dispersed individual residences and small tracts of non-irrigated farmland. Flows in the upper Tuolumne River are regulated and controlled by the City and County of San Francisco's (CCSF) Hetch Hetchy Water and Power system, including Hetch Hetchy Reservoir, Lake Eleanor and Cherry Lake, and CCSF's extensive infrastructure of water transmission and water power facilities.

1.1.2. Foothills Reach of the Tuolumne River

The foothills reach of the Tuolumne River can be considered to extend from RM 54 to RM 80. Because this reach is dominated by the Districts' Don Pedro Project, it is referenced herein as the "Project area" for purpose of this watershed description. This portion of the watershed includes no major tributaries. Woods Creek and Moccasin Creek are small tributaries that flow into Don Pedro Reservoir. Moccasin Creek contains Moccasin Reservoir, a 505 acre-feet (AF) water supply reservoir owned by CCSF, which feeds CCSF's Foothill Tunnel. A California Department of Fish and Wildlife (CDFW) hatchery is located

below Moccasin Dam but above Don Pedro Reservoir. The Project area reach extends from about elevation 300 feet to about elevation 850 feet, or from the tailwater of Don Pedro powerhouse to about 20 feet above the Don Pedro Reservoir normal maximum reservoir elevation of 830 feet. This subbasin area is about 230 square miles and is dominated by federal lands administered by the Bureau of Land Management (BLM), but also small communities, dispersed farmland tracts, and the Don Pedro Project and its facilities.

1.1.3. Lower Tuolumne River

The lower Tuolumne River watershed, the subbasin from RM 0 to 54, covers approximately 430 square miles of drainage area, and contains one major tributary, Dry Creek. Other contributions come from Peaslee Creek as well as McDonald Creek (via Turlock Lake) primarily during and after storm events. In this reach, the Tuolumne River extends from about elevation 35 feet at the confluence with the San Joaquin River to elevation 300 feet at the tailrace of the Don Pedro powerhouse. The lower Tuolumne River watershed is long and narrow and is dominated by irrigated farmland and the urban/suburban areas associated with the City of Modesto, Waterford, and Ceres. Flows in the lower Tuolumne River are significantly controlled by La Grange Diversion Dam, a 127-foot-high diversion dam constructed in 1893 and jointly owned by the Districts, which divert flows from the Tuolumne River for irrigation, municipal, and industrial water supply purposes.

1.2. Geography and Topography of the River Basin

1.2.1. Upper Tuolumne River

The main stem Tuolumne River forms at an elevation just above 8,600 feet (NPS 2010a) in the Tuolumne Meadows area of Yosemite National Park, within Tuolumne County, where rugged, granitic peaks form the perimeter of the high alpine meadow. At this point, the 8-mile-long Dana Fork and the 13-mile-long Lyell Fork converge (NPS 2010b) draining the south-facing slopes of the mountains near Tioga Pass and the north-facing slopes of the Cathedral Range in Yosemite's central-eastern area. This vast, high portion of the central Sierra Nevada bears the marks of Pleistocene and Holocene glaciations (Clark 1995) and retains some glaciers, including the largest on Mt. Lyell, to the present day (NPS 2010b.) From Tuolumne Meadows, the Tuolumne River winds and plunges generally westward through a number of waterfalls, including Tuolumne, California, Le Conte and Waterwheel falls (DeLorme 2003), before entering the Grand Canyon of the Tuolumne, the steep-sided canyon chiseled in Sierra batholith granite. The Tuolumne River then enters the Hetch Hetchy Reservoir, owned by the CCSF, still within the bounds of Yosemite National Park. From upstream of Tuolumne Meadows in Yosemite National Park to about RM 80, a total of 83 miles of the Tuolumne River is designated as a National Wild and Scenic River (NPS

2010b.) The topography of the upper Tuolumne River basin is uniformly steep with shallow soils and much exposed rock. The high peaks of Mount Lyell, Mount Dana, and Johnson Peak rim the upper watershed. The Tuolumne River passes alternately through mountain meadows, narrow, deeply incised canyons, and the Hetch Hetchy Reservoir as it travels through the Upper Tuolumne region from elevation 8,600 to 850 feet.

1.2.2.Don Pedro Area

Don Pedro Reservoir is a large reservoir with an unusual stairstep/H-shape and two distinct morphological sections. The narrow, upstream portion of the reservoir from the Wards Ferry Bridge to the central portion of the reservoir referred to as Upper Bay occupies the steep-sided, rocky and winding Tuolumne River canyon. The downstream portion of the reservoir from Upper Bay to the Don Pedro Dam fills the gentler-sloped canyon where the Tuolumne River emerges into the low Sierra foothills and then into the wider Tuolumne River valley. The foothills area in this portion of the watershed is dominated by gently rolling grasslands and farmland. Precipitation and runoff characteristics in this area are dramatically different than that of the Upper Tuolumne.

1.2.3.Lower Tuolumne River

The Tuolumne River exits the Don Pedro Reservoir and enters the lower Tuolumne River area. This area of the watershed transitions from gently rolling hills near its easterly reaches to uniformly flat floodplain and terrace topography in the downstream direction. Soils are deep and fertile and irrigated agriculture and urban land use dominates the landscape.

The Tuolumne River downstream of La Grange Diversion Dam flows 52 river miles to its confluence with the San Joaquin River. The Tuolumne River leaves its steep and confined bedrock valley and enters the eastern Central Valley downstream of La Grange Diversion Dam near La Grange Regional Park, where hillslope gradients in the vicinity of the river corridor are typically less than five percent. From this point to the confluence with the San Joaquin River, the modern Tuolumne River corridor lies in an alluvial valley. Within the alluvial valley, the river can be divided into two geomorphic reaches defined by channel slope and bed composition: a gravel-bedded reach that extends from La Grange Diversion Dam (RM 52) to Geer Road Bridge (RM 24); and a sand-bedded reach that extends from Geer Road Bridge to the confluence with the San Joaquin River (McBain & Trush 2000). The gravel- and sand-bedded zones have been further subdivided into seven reaches based on present and historical land uses, the extent and influence of urbanization, valley confinement from natural and anthropogenic causes, channel substrate and slope, and salmonid use (McBain & Trush 2000). The major reaches are:

- Reach 1 (RM 0-10.5): Lower sand-bedded reach,
- Reach 2 (RM 10.5-19.3): Urban sand-bedded reach,
- Reach 3 (RM 19.3-24.0): Upper sand-bedded reach,
- Reach 4 (RM 24.0-34.2): In-channel gravel mining reach,
- Reach 5 (RM 34.2-40.3): Gravel mining reach,
- Reach 6 (RM 40.3-45.5): Dredger tailing reach, and
- Reach 7 (RM 45.5-52.1): Dominant salmon spawning reach.

Large-scale anthropogenic changes have occurred to the lower Tuolumne River corridor since the California Gold Rush in 1848. Gold mining, grazing, and agriculture encroached on the lower Tuolumne River channel before the first aerial photographs were taken by the Soil Conservation Service in 1937. Excavation of bed material for gold and aggregate to depths below the river thalweg eliminated active floodplains and terraces and created large in- and off-channel pits. Agricultural and urban encroachment in combination with reduction in coarse sediment supply and high flows has resulted in a relatively static channel within a narrow floodway confined by dikes and agricultural fields. Although the tailing piles are primarily the legacy of gold mining abandoned in the early 20th century, gravel and aggregate mining continued alongside the river for a number of miles, particularly upstream of the town of Waterford around RM 34 (Tuolumne River TAC 2000). Downstream of Waterford, the Tuolumne River continues an increasingly-sinuous path across the agricultural lands of the Central Valley, through the City of Modesto. The Tuolumne River finds its confluence with the San Joaquin River approximately 15 river miles beyond Modesto, along the axis of California's Central Valley.

1.3. Climate and Hydrology

The Tuolumne River watershed covers a total of approximately 1,960 square miles and encompasses a wide range of climates and hydrologic conditions, from the snowy high Sierra Mountains to the mild, Mediterranean climate and hot summers of California's Central Valley. Precipitation varies substantially from year to year, as winter storms are driven by large-scale atmospheric disturbances originating in the Aleutian Island area of Alaska (USACE 1972). Larger streams are primarily snowmelt-driven, as rivers carry snowmelt runoff from the high Sierra down across the Central Valley, and normally receive only a relatively small proportion of their flows from rain-driven tributaries in the lower elevations. Small- to

moderate-size drainages in the region are often ephemeral or intermittent, going dry or having only subterranean flow in most years during California's parched summer and early-fall seasons.

1.3.1.Climate

The climate of the Tuolumne River basin varies considerably over the river's 150-mile-long journey. Its western portion in the low-lying Central Valley is semi-arid and the high-peaks region at its eastern edge in the Sierra Mountains is wet. The Tuolumne River area in the Sierra Nevada foothills where the Project is located has what is often described as a Mediterranean-type climate: cool, wet winters with snow only rarely and hot, dry summers. From the foothills westward into the Central Valley, winter precipitation occurs mostly in the form of rain from the months of December through April. In the higher elevations of the Tuolumne River watershed, precipitation consists largely of snow in the winter with significant accumulation in the higher elevations from December through April, and seasonal snowmelt typically April through July. At these higher elevations, the occasional rain-on-snow events may cause large amounts of runoff in a short period of time during winter months. Annual precipitation in the Tuolumne River watershed ranges from 12 inches in the Central Valley to over 60 inches in the high mountain areas.

1.3.2.Hydrology

The hydrologic characteristics of the Tuolumne River and its tributaries vary significantly from its headwaters to its terminus at the San Joaquin River. As indicated by the climate data, the Tuolumne River spans two distinct hydrologic regimes: the snowmelt-driven system of the Sierra Nevada, present at the high elevations; and the rain-driven streams present at lower elevations.

1.3.2.1. Upper Tuolumne River

East of the Don Pedro Reservoir, especially in areas above approximately 5,000 feet where snow accumulation is significant, the upper Tuolumne River and its tributaries are snowmelt-dominated, often high-gradient streams with substantial cascades in a primarily granitic area (NPS 2010b). Smaller streams in this system may have extremely low flows in summer due to the granitic landscape; for example, the Middle Fork Tuolumne River typically has flows in the August through October period in the range of 0 to 3 cfs (historical data from USGS Gage No. 11282000). In areas with deeper soil profiles or small springs (found occasionally throughout the Sierra Nevada), interflow or subterranean flow may continue to feed streams in some areas. In these upper elevations, approximately 75 percent of the runoff occurs between April and July, with only 20 percent or less occurring in the winter months from December through March, and as little as five percent occurring from August through November (USACE 1972).

In the middle elevations of the watershed, from 1,000 to 5,000 feet, more of the precipitation occurs as rainfall than at the high locations, and these areas can have multiple rain-on-snow periods each year that reduce the accumulated snowpack. Several reservoirs are located in this middle-elevation band in the Tuolumne River watershed upstream of the Project, including CCSF's Cherry Lake (elevation 4,700 feet), Lake Eleanor (elevation 4,660 feet), and Hetch Hetchy Reservoir (elevation 3,800 feet) (CCSF 2006). A greater proportion of runoff in these elevations occurs during the December through March period due to winter rainstorms, with much of the remaining snowmelt runoff from higher elevations occurring in April through July (USACE 1972). The lower the elevation of a given stream, the greater the proportion of runoff that occurs in the winter months following rainstorms.

1.3.2.2. Don Pedro Area

Although the Don Pedro Reservoir is located at a significantly lower elevation where snowfall is less common, the main stem Tuolumne River derives much of its flow from those higher elevations where significant snow accumulates. Some smaller tributaries that are almost exclusively rain-driven flow directly into Don Pedro Reservoir, but these streams generally provide only minimal inflow to the reservoir. The average annual full natural flow of the Tuolumne River upstream of Don Pedro Dam is approximately 1.8 to 1.9 million AF (California Data Exchange Center [CDEC] 2010). Annual amounts can vary widely. Since 1970, the least annual runoff was 395,000 AF (1977), and the greatest was 4,863,350 AF (2017). Due in large part to CCSF's out-of-basin diversions upstream of the Project, the total releases from the Don Pedro Project have averaged approximately 1.6 million AF annually (WY 1975 to 2009). It should also be noted that the pattern of inflow to Don Pedro Reservoir is highly regulated, and water derived from spring snowmelt is often released from upstream reservoirs over a longer period than would occur naturally.

One of the purposes of the Don Pedro Project is flood control. The Project area and, even more so, the lower Tuolumne River are subject to rain-floods and rain-on-snow floods, which are most likely to occur in winter and early spring, as well as snowmelt-floods which are most likely in spring through early summer. Consequently, the flood control manual for the Project (USACE 1972) requires the maintenance of flood space of at least 340,000 AF for a long period of the year—from early October through April—and conditional flood space depending on the anticipated snowmelt runoff during May and possibly June and July.

1.3.2.3. Lower Tuolumne River

At Don Pedro Dam, water flows from the powerhouse or outlet works into the reach of the Tuolumne River impounded by the La Grange Diversion Dam, an irrigation diversion dam owned by TID and MID. From the La Grange impoundment, water is either diverted into MID's canal system to the north of the Tuolumne River and into TID's canal system to the south of the Tuolumne River or released into the lower Tuolumne River downstream of La Grange Diversion Dam. Downstream of Don Pedro, the Tuolumne River becomes a lower gradient stream on its journey to the San Joaquin River. In this low-elevation area, the vast majority (around 75 percent) of local runoff occurs during winter rainstorms between December and March. Also contributing to flows within this region are natural inflows from Dry Creek and Peaslee Creek, as well as urban and agricultural runoff and operational spills from irrigation canals. Some of the streamflow in this area, however, is derived from groundwater inflow, and the lower Tuolumne River is generally considered to be a gaining stream (California Department of Water Resources [CDWR] 2002). This groundwater contribution to the lower Tuolumne has not been well quantified.

2. Water Operations

The La Grange Diversion Dam (LGDD) is located at the exit of a narrow canyon and the impoundment formed by the diversion dam provides little to no active storage. LGDD allows for the diversion of water from the Tuolumne River to the TID and MID water supply canal systems. Combined, these canals provide water for over 200,000 acres of prime Central Valley farmland and a portion of the City of Modesto's M&I supply. Flows released from Don Pedro Reservoir that are not intended to be diverted into either of the TID or MID water supply systems are passed safely downstream to the Tuolumne River. Flows passing through the TID powerhouse are delivered to TID's 700-foot-long tailrace, which flows into the main stem of the Tuolumne River. TID's La Grange powerhouse operates in a run-of-river mode and has a hydraulic capacity of approximately 580 cfs. Flows are also passed downstream through either the MID Hillside gates or the Portal 1 gate to maintain favorable temperature and dissolved oxygen conditions in the LGDD plunge pool.

Flows released from the Don Pedro Reservoir are diverted by the Districts, spilled over the LGDD spillway, or pass through one of the Districts' outlet structures. Diverted water is delivered to the Districts' water supply delivery systems. On the MID side of the river, the Hillside release gates can pass water to the plunge pool below LGDD approximately 400 feet downstream of the diversion dam. Normally, a flow of approximately 5 to 10 cfs2 is discharged from these gates to the river. The Portal 1

gate is also located in the spillway near the MID side of the river. On the TID side of the river, water can flow to the river through either two 5-foot-wide by 4-foot-high sluice gates located adjacent to the penstock intakes or through the La Grange powerhouse.

A portion of the flows that are passed at LGDD to the river are releases made at the Don Pedro Project over and above flow amounts needed to be diverted by LGDD for water supply purposes, including flows released at Don Pedro to meet its FERC license requirements. These flows are normally passed downstream at LGDD via the TID intake and tunnel, penstocks and powerhouse units.

3. Operation Facilities

3.1. Don Pedro Dam

The Don Pedro Dam is a 1,900 ft long and 580 ft high zoned earth and rockfill structure. The top of the dam is at elevation 855 ft. The drainage area of the Tuolumne River upstream of the Don Pedro Dam is 1,533 mi2 (USACE 1972). The dam has a top width of 40 ft and a bottom width of approximately 3,000 ft. The downstream slope is grass-covered and the upstream slope has riprap protection extending to elevation 585 ft. A secured access road is provided along the top of the dam for use by Districts' personnel.

3.2. La Grange Diversion Dam

The original 127.5-foot-high arched dam placed in service in 1893 was constructed of boulders set in concrete and faced with roughly-dressed stones from a nearby quarry. In 1923, an 18-inch high concrete cap was added, and in 1930 an additional 24-inch-high concrete cap was added, resulting in the final and current height of 131 feet. The crest elevation was raised to increase the flows that could be diverted to each of the Districts' irrigation canals. There have been no significant modifications to LGDD and spillway since 1930, except for routine maintenance and repairs. The dam was constructed such that the top of the dam is almost entirely an uncontrolled overflow spillway. The spillway crest is at elevation 296.5 feet (all elevations are referenced to 1929 National Geodetic Vertical Datum) and has a length of 310 feet. The maximum flow over the spillway occurred in 1997 and was approximately 59,462 cubic feet per second (cfs).

The diversion dam was constructed for the purpose of raising the level of the Tuolumne River to a height which enabled gravity flow of diverted water into the Districts' irrigation systems. When not in spill mode, the water level above the diversion dam is between 294 feet and 296 feet approximately 90 percent of the time. The headpond formed by LGDD is narrow and steepsided and flow conditions along the headpond reflect a more riverine than lacustrine environment.

3.3. MID Diversion Tunnel

Due to maintenance and repair issues experienced along its Upper Main Canal, MID constructed in 1987/1988 the current diversion tunnel and tunnel intake to bypass this upper section of the Main Canal. The intake to the MID diversion tunnel is located in the face of a cliff on the west (river right) bank about 100 feet upstream of LGDD. The invert of the MID tunnel is at elevation 277.4 feet. Flow is conveyed through the 15-foot, 6-inch-diameter tunnel for 895 feet to a control structure. Flow is then conveyed through a 5,300-foot-long tunnel to an outlet structure which controls flow to the MID Main Canal, which provides water to MID's irrigation and M&I water systems. The design maximum flow rate for this tunnel is approximately 2,000 cfs. Water is delivered to MID's Hillside gates via the uppermost section of the retired Upper Main Canal.

3.4. TID Diversion Tunnel

TID's diversion tunnel and intake divert Tuolumne River flows to TID's main irrigation canal. The TID intake is located on the east (left) bank just upstream of the diversion dam and consists of two separate structures. The south intake structure contains two 8-foot wide by 11-foot, 10-inch-high control gates driven by electric motor hoists. The north intake structure contains a single 8-foot by 12-foot control gate.

The north intake structure was added in 1980 to increase the delivery capability to TID's irrigation canal system by reducing head losses through the single intake and lowering the tunnel invert. Flows from the intake are conveyed to a 600-foot-long tunnel to the 110-foot-long forebay for the TID Main Canal. The forebay was modified in the 1980s to reinforce the structure. Flows to TID's irrigation system are regulated at the Main Canal Headworks consisting of six slide gates, each of which being 5-feet-wide by 8-feet, 4- inches-high.

3.5. Infiltration Galleries 1 and 2

The Districts are proposing to operate two in-river infiltration galleries (IGs) at approximately RM 25.9 just downstream of Fox Grove Park on the lower Tuolumne River. IG-1, which has a flow capacity of 100 cfs, was previously installed by TID in 2001 during the restoration of Special-run Pool-9 (SRP-9) at RM 25.8 located below the Geer Road Bridge. IG-2 would be installed just upstream of IG-1 with a flow capacity of 125 cfs. Both IGs would be connected to pump stations located on the south bank of the river. Water withdrawn at the IGs would become part of the Districts' water supplies by being transported to TID's Ceres Main Canal or other non-Project facility.

4. Points of Diversion

1. Don Pedro: Cardoza Ridge Off-Stream Reservoir. An approximately 21,400 foot long water conveyance system with a diversion capacity of approximately 5,000 cfs from Don Pedro Reservoir to Cardoza Ridge Off-Stream Storage Reservoir.
2. Don Pedro: Montgomery Off-Stream Reservoir. An approximately 10.6 mile long water conveyance system with a diversion capacity of approximately 5,000 cfs from Don Pedro Reservoir to Montgomery Off-Stream Storage Reservoir.
3. Don Pedro: Don Pedro – New Melones Intertie. Up to 17,000 feet of water conveyance facilities to interconnect the two reservoirs with a diversion capacity of approximately 5,000 cfs.
4. La Grange Diversion Dam (TID): Increase capacity of TID's existing point of diversion and Upper Main Canal to approximately 5,000 cfs to convey water to Turlock Lake to supply various recharge projects served by TID's existing irrigation system and to supply the Dickenson Off-Stream Reservoir.
5. La Grange Diversion Dam (MID). Increase capacity of MID's existing point of diversion and Main Canal to convey approximately 4,000 cfs to Modesto Reservoir to supply various recharge projects served by MID's existing irrigation system, and to supply the Upper and Lower Cooperstown Off-Stream Reservoirs and the Roberts Ferry Off-Stream Reservoir.
6. Infiltration Galleries: Infiltration Galleries at approximately River Mile 25.9 on the Tuolumne River. The Districts are proposing to operate two in-river infiltration galleries (IGs) at approximately RM 25.9 just downstream of Fox Grove Park on the lower Tuolumne River with a combined total diversion capacity of approximately 225 cfs.

5. Exhibits

Exhibit A – Point of diversion and place of use map.

Exhibit B – Proposed major surface water storage reservoirs.

ATTACHMENT 4

WATER AVAILABILITY

Contents

1. Background

The water availability analysis is intended solely for the purposes of supporting the Application. The level of analysis is detailed, and projected quantities are based on the historical record. The purpose of this section of the Application is to demonstrate a reasonable likelihood of water available for appropriation to support granting the Application. The water availability analysis includes a limited number of assumptions regarding the operation of the facilities, diversion of water from specific sources when water is available from multiple sources, and diversions at individual points of diversion (PODs). The analysis is based on the specific PODs included in the Application and provides a projection of water availability based on observed hydrologic conditions, when water has been available historically, considering the seasons and sources included in the Application. The analysis demonstrates that the rates and volumes contained in Application are appropriate and reasonable for the purpose of accepting the application, particularly in light of the fact that the Application is focused on supporting sustainability of the groundwater basins within the proposed place of use identified in the Application. This approach is in line with the State of California's approach to climate change and flood mitigation as described in Executive Order N-10-19, Climate Resilience Program.

2. Analytical Approach

The analysis to determine whether water is available for appropriation estimates water at each POD based on historical stream gage data or calculated streamflow and subtracts existing minimum flow requirements and the face value of downstream water rights. The remaining water is assumed to be available for appropriation. The analysis includes recorded hydrology from the past twenty-four years, from water year 1998 through water year 2021. Because the Tuolumne River is fully appropriated for a portion of the year, this Application seeks to appropriate water only during the period of time where water is available for appropriation, from November 1 to June 14.

Although the water record from water years 1998 through 2021 has been studied and provided below, the November 1, 2016 through June 14, 2017 time period includes the Tuolumne River non-FASS period with the greatest amount of runoff on record. The full natural flow (FNF) at La Grange (the standard point of calculation for Tuolumne River runoff) for this peak flow period was 3,788 thousand acre-feet (TAF). Therefore, this high flow event indicates that water is available for appropriation, even beyond the demands of senior water rights and fish flow requirements and this water could be available for appropriation and beneficial use.

The analysis evaluates three separate reaches of the flow path from the point of diversion to the Sacramento-San Joaquin River Delta (the Delta). The individual reaches are defined as:

1. Point of diversion to the confluence of the San Joaquin and Tuolumne Rivers
2. Lower San Joaquin River from the confluence with the Tuolumne River to Vernalis
3. Delta

The analysis of all three reaches demonstrates that this Application takes a conservative approach to evaluating the water available to appropriate. For example, it considers all downstream users and assumes these downstream users will put all water to full and beneficial use. Even after these conservative assumptions, the analysis establishes that there is water available for appropriation under this Application. The flow path approach is described in a recent document provided by the State Board titled, "Water Availability Analysis for Streamlined Recharge Permitting" (https://www.waterboards.ca.gov/waterrights/water_issues/programs/applications/groundwater_recharge/docs/streamlined_waa_guidance.pdf).

The analytical approach provides several advantages compared to other potential approaches. First, the analysis was completed at a daily time-step. A daily time-step analysis provides more detail regarding the flow, minimum required flow, and existing water rights as compared to a longer time-step. Second, the use of daily data for a recent period reflects actual conditions on the source streams, the San Joaquin River (SJR), and in the Delta. Observed, recent streamflow data reflect the diversion of water under many of the existing water rights, including storage rights. The approach is conservative in that it relies on observed stream flows that include the use of water under existing water rights and claims, but it also accounts for existing water right permits and licenses to determine water available for appropriation. Third, the approach relies on observed data without the use of more complex models that may require documentation and review before they can be accepted. It may be appropriate to utilize models and other tools in the future to refine estimates and operations for the purpose of issuing a permit, but reliance on available, existing data is appropriate for the purpose of the Application. The analysis was conducted by combining the observed data, water right information, and diversion capacities.

3. Analysis

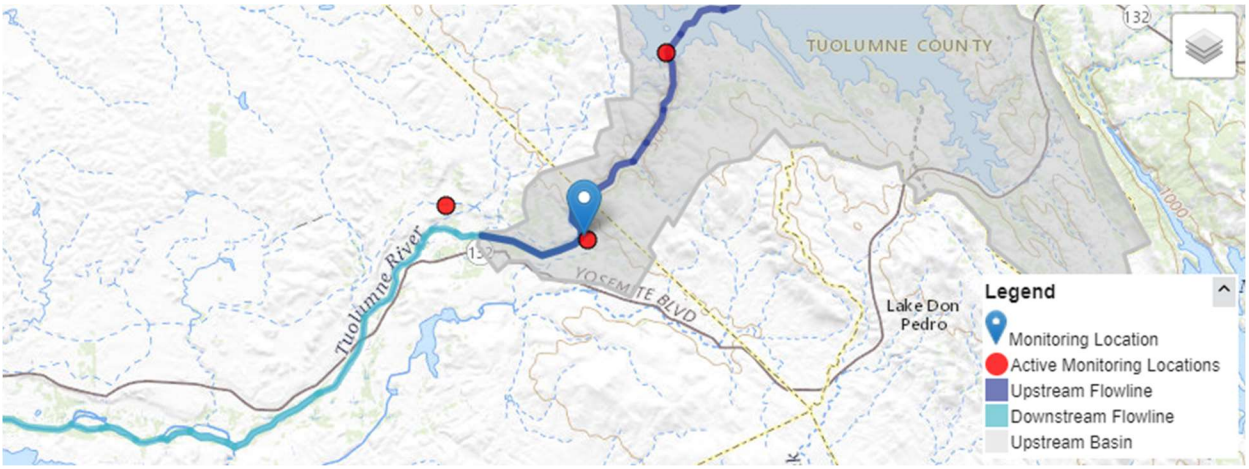
The following sections describe the assumptions and analysis for each of the three reach areas: Tuolumne River stretch (point of diversion at La Grange to the San Joaquin River confluence), lower San Joaquin River, and the Delta. Separate sections describe the analysis from the Tuolumne River.

3.1. Point of Diversion to San Joaquin River

An analysis was conducted for the Tuolumne River to the confluence with the lower SJR. The following sections describe the assumptions and analysis for the Tuolumne River.

3.1.1. Tuolumne River Flow Measurement

Analysis of water available from the Tuolumne River was based on the daily record of flow at the Tuolumne River gage flows below Don Pedro Reservoir as measured at USGS gage number 11289650 (TUOLUMNE R BL LAGRANGE DAM NR LAGRANGE CA). The location of the gage is shown below in Figure 4.1



The measured flow at the gage for the period of historic record fluctuates by year type but indicates flood flows are available for appropriation in several years. As shown in Figure 4.2, flows in the Tuolumne at La Grange, which is below Don Pedro and La Grange Diversion Dam, range from approximately 114 TAF to approximately 3,530 TAF. In 2016–2017, the water year with the highest measured flow during the period in which the Tuolumne River is not fully appropriated, flows to the Tuolumne River below Don Pedro Reservoir and La Grange Diversion Dam totaled approximately 2,842 TAF (see Figure 4.2.1). During that period, there were approximately 170 TAF of required instream flow under the Don Pedro FERC license, which leaves a net of approximately 2,672 TAF of excess flow.

Figure 4.2

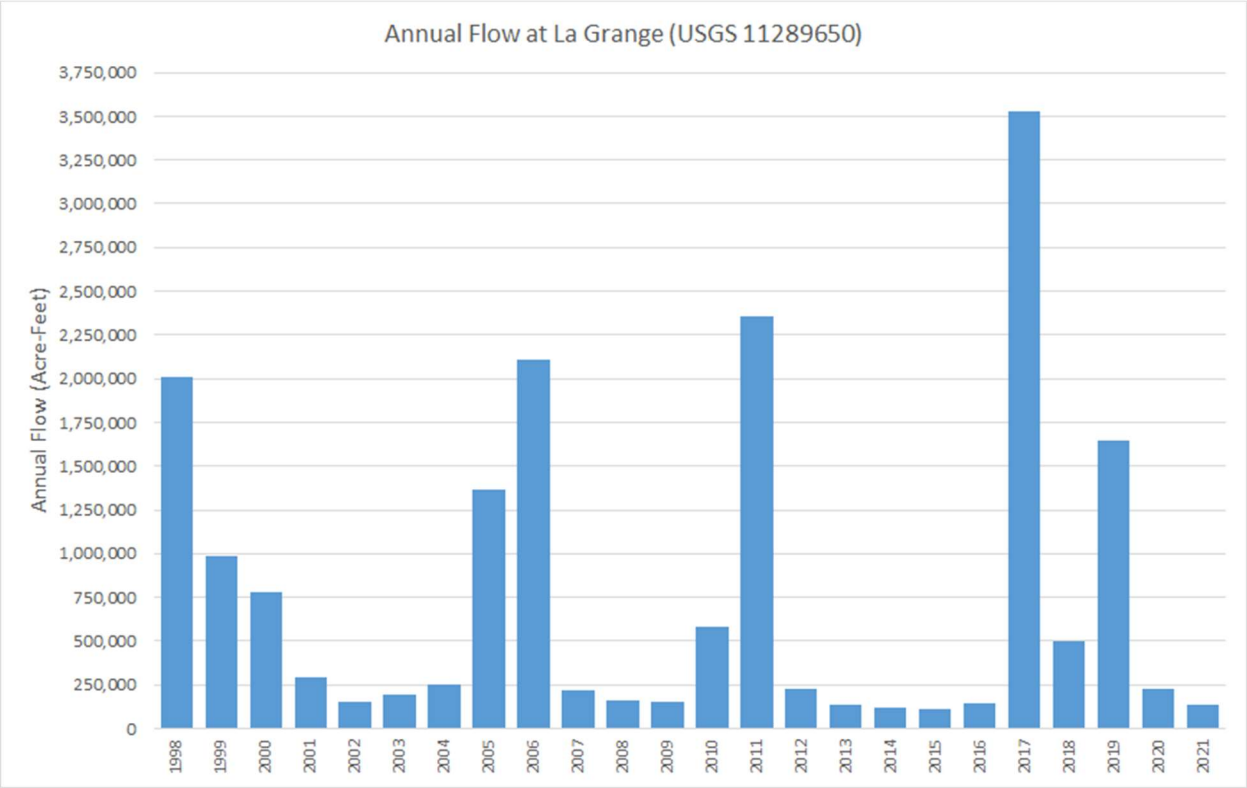

Annual Flow at La Grange (USGS 11289650)
Annual Flow (Acre-Feet)
3,750,000
3,500,000
3,250,000
3,000,000
2,750,000
2,500,000
2,250,000
2,000,000
1,750,000
1,500,000
1,250,000
1,000,000
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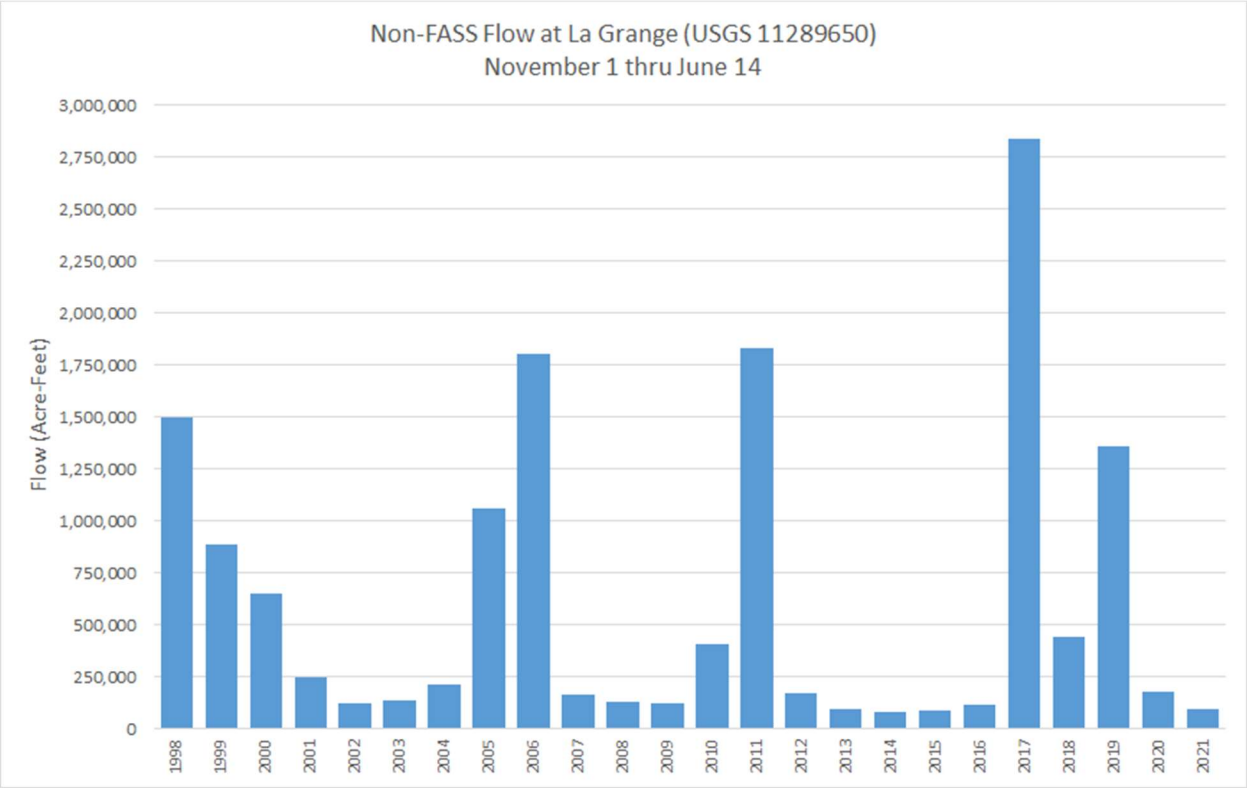
Figure 4.2.1



3.1.2. Minimum Instream Flow Requirements on the Tuolumne River

Minimum flow requirements for the Tuolumne River as shown in Figure 4.3.

Figure 4.3 Schedule of flow releases to the lower Tuolumne River by water year type contained in FERC's 1996 order.

Schedule	Units	# of Days	Critical and Below	Median Critical[1]	Interm. CD[1]	Median Dry	Interm. D-BN	Median Below Normal	Interm. BN-AN[2]	Median Above Normal	Interm. AN-W	Median Wet/Max
Occurrence	%	--	6.4%	8.0%	6.1%	10.8%	9.1%	10.3%	15.5%	5.1%	15.4%	13.3%
October 1–15	cfs	15	100	100	150	150	180	200	300	300	300	300
	AF	--	2,975	2,975	4,463	4,463	5,355	5,950	8,926	8,926	8,926	8,926
Attraction Pulse	AF	--	none	none	none	none	1,676	1,736	5,950	5,950	5,950	5,950
October 16–May 31	cfs	228	150	150	150	150	180	175	300	300	300	300
	AF	--	67,835	67,835	67,835	67,835	81,402	79,140	135,669	135,669	135,669	135,669
Outmigration Pulse Flow	AF	--	11,091	20,091	32,619	37,060	35,920	60,027	89,882	89,882	89,882	89,882
June 1–September 30	cfs	122	50	50	50	75	75	75	250	250	250	250
	AF	--	12,099	12,099	12,099	18,149	18,149	18,149	60,496	60,496	60,496	60,496
Volume (total)	AF	365	94,000	103,000	117,016	127,507	142,502	165,003	300,923	300,923	300,923	300,923

Source: FERC 1996.

[1] Critically dry.

[2] Between a Median Critical Water Year and an Intermediate Below Normal-Above Normal Water Year, the precise volume of flow to be released by the Districts each fish flow year is to be determined using accepted methods of interpolation between index values.

In addition, the State Board is in the process of updating the Bay-Delta Water Quality Control Plan and has adopted new minimum flow requirements of 40 percent of the unimpaired flow from February through June on the Tuolumne River and other salmon-bearing tributaries (Merced and Stanislaus Rivers) of the San Joaquin River. The State Board is still working on other phases of the Water Quality Control Plan update. There is on-going litigation regarding the minimum flow requirements, and there is currently no set date for implementing these new requirements.

Therefore, currently, the only existing flow requirements on the Tuolumne River are included in Figure 4.3. For the Application period, instream flow requirements under the Don Pedro FERC license totaled some 170 TAF.

3.1.3. Existing Water Rights on the Tuolumne River

A review of the existing water rights and claims on the Tuolumne River was conducted. Water rights and claims from eWRIMS were compiled and reviewed to develop a diversion rate of existing rights by day for all years. The diversion rate of existing rights represents the face value and defined season for all post-1914 water right applications, permits, and licenses, and it includes the maximum reported use during a single month and historical season of use for the period of available reporting data for all riparian and pre-1914 claims. Figure 4.4 includes all demand that is more than 0 acre-feet in the Tuolumne River. Statements of diversion and use with no listed values were not included in estimated demand due to difficulty in estimating valid demands for these non-quantified claims. Estimates for such projected demand during the Application period could be approximated if necessary.

Figure 4.4

Application	Permit	License	Date	Primary Owner	Face Value Amount	HUC 12 Location
A010902	006346	003579	10/16/1944	CAMP TAWONGA-TAWONGA JEWISH COMMUNITY CORP	21.7	Lower Middle Tuolumne River
A012262	007309	006985	01/26/1948	Gregory B. Reed	2171.9	Salter Gulch-Tuolumne River
A009996	005909	005418	09/06/1940	TURLOCK I D & MODESTO I D	868773	Big Creek-Tuolumne River, Peaslee Creek-Tuolumne River

A003648	003026	002424	09/24/1923	TURLOCK I D & MODESTO I D	48595.8	Peaslee Creek-Tuolumne River
A013496	008037	004747	12/02/1949	VERNA M MURRAY	83.9	Town of Riverdale Park-Tuolumne River
A009573	005463	002847	05/01/1939	Lyons Land Management, L.P.	4781.8	Town of Riverdale Park-Tuolumne River
A001633	000784	002072	01/20/1920	PHILIP DICKERSON	1518.3	Town of Riverdale Park-Tuolumne River
A003139	001699	002580	04/02/1943	TURLOCK IRRIGATION DISTRICT	436558.4	Peaslee Creek-Tuolumne River
A015828	010132	006319	04/09/1954	STANISLAUS NATIONAL FOREST	3.3	Lower Middle Tuolumne River
A011390	006631	007451	05/04/1946	RICHARD MARCHY	818.2	Town of Riverdale Park-Tuolumne River
A012962	007550	004033	03/04/1949	SILICON VALLEY MONTEREY BAY AREA COUNCIL INC B S A	2.7	Upper North Fork Tuolumne River
A001233	001165	005417	04/08/1919	TURLOCK I D & MODESTO I D	325000	Big Creek-Tuolumne River, Peaslee Creek-Tuolumne River
A004607	002357	002071	05/26/1925	PHILIP DICKERSON	356.6	Town of Riverdale Park-Tuolumne River
A001532	001166	005421	11/21/1919	TURLOCK I D & MODESTO I D	1851934.5	Big Creek-Tuolumne River
A009301	005192	004576	05/20/1938	K AND T RANCHES	1066.1	Town of Riverdale Park-

						Tuolumne River
A001232	001164	005420	04/08/1919	TURLOCK I D & MODESTO I D	325000	Big Creek-Tuolumne River
A014127	009320	011058	01/16/1951	TURLOCK I D & MODESTO I D	1046800	Big Creek-Tuolumne River
A006711	004271	002425	06/25/1930	TURLOCK I D & MODESTO I D	480800.4	Peaslee Creek-Tuolumne River
A007058	003825	002727	08/24/1931	STANISLAUS NATIONAL FOREST	25.5	Upper North Fork Tuolumne River
A015371	009578	005478	06/08/1953	WILLIAM J HALL	91.2	Salter Gulch-Tuolumne River
A005269	002727	001173	11/15/1926	HOY REVOCABLE TRUST DATED SEPTEMBER 16 1999	635.4	Town of Riverdale Park-Tuolumne River
A012674	007675	007556	09/02/1948	Couchman Brothers	1622.7	Town of Riverdale Park-Tuolumne River
A012396	007348	004949	03/11/1948	MICHAEL R VAN ATTA	487.9	Town of Riverdale Park-Tuolumne River
A015485	009781	005681	08/27/1953	STANISLAUS NATIONAL FOREST	6.7	Lower Middle Tuolumne River
A014126	009319	011057	01/16/1951	TURLOCK I D & MODESTO I D	1046800	Big Creek-Tuolumne River
A009997	005910	005419	09/06/1940	TURLOCK I D & MODESTO I D	721200.6	Big Creek-Tuolumne River, Peaslee Creek-Tuolumne River

Some of the rights on the Tuolumne River are for periods outside the period of the Application, from November 1 to June 14. Those rights on the Tuolumne River that are during the Application period are

provided in Figure 4.5 below. Specifically, Figure 4.5 shows the existing rights during the season in which this Application seeks to divert water, from November 1 to June 14.

Figure 4.5

Application	Permit	License	Date	Primary Owner	Face Value Amount
A012262	007309	006985	01/26/1948	Gregory B. Reed	2171.9
A009996	005909	005418	09/06/1940	TURLOCK I D & MODESTO I D	868773
A003648	003026	002424	09/24/1923	TURLOCK I D & MODESTO I D	48595.8
A013496	008037	004747	12/02/1949	VERNA M MURRAY	83.9
A009573	005463	002847	05/01/1939	Lyons Land Management, L.P.	4781.8
A001633	000784	002072	01/20/1920	PHILIP DICKERSON	1518.3
A003139	001699	002580	04/02/1943	TURLOCK IRRIGATION DISTRICT	436558.4
A015828	010132	006319	04/09/1954	STANISLAUS NATIONAL FOREST	3.3
A011390	006631	007451	05/04/1946	RICHARD MARCHY	818.2
A001233	001165	005417	04/08/1919	TURLOCK I D & MODESTO I D	325000
A004607	002357	002071	05/26/1925	PHILIP DICKERSON	356.6
A001532	001166	005421	11/21/1919	TURLOCK I D & MODESTO I D	1851934.5
A009301	005192	004576	05/20/1938	K AND T RANCHES	1066.1
A001232	001164	005420	04/08/1919	TURLOCK I D & MODESTO I D	325000
A014127	009320	011058	01/16/1951	TURLOCK I D & MODESTO I D	1046800
A006711	004271	002425	06/25/1930	TURLOCK I D & MODESTO I D	480800.4
A007058	003825	002727	08/24/1931	STANISLAUS NATIONAL FOREST	25.5
A015371	009578	005478	06/08/1953	WILLIAM J HALL	91.2

A005269	002727	001173	11/15/1926	HOY REVOCABLE TRUST DATED SEPTEMBER 16 1999	635.4
A012674	007675	007556	09/02/1948	Couchman Brothers	1622.7
A012396	007348	004949	03/11/1948	MICHAEL R VAN ATTA	487.9
A015485	009781	005681	08/27/1953	STANISLAUS NATIONAL FOREST	6.7
A014126	009319	011057	01/16/1951	TURLOCK I D & MODESTO I D	1046800
A009997	005910	005419	09/06/1940	TURLOCK I D & MODESTO I D	721200.6
				Total:	7,165,132

However, the most critical consideration of water rights for the Tuolumne River is the segment of the River below Don Pedro and La Grange Diversion Dam to the confluence with the San Joaquin River because this is the location of gaged data for water remaining after upstream users have exercised their rights. This means that the demand from water rights above La Grange Diversion Dam have already been satisfied and the only unaccounted for water rights coming out of the gaged data are rights below the gaged location. The water rights that exist on the Tuolumne River below Don Pedro during the Application period are shown in Figure 4.6.

Figure 4.6

Application	Permit	License	Date	Primary Owner	Face Value Amount
A012262	007309	006985	01/26/1948	Gregory B. Reed	2171.9
A013496	008037	004747	12/02/1949	VERNA M MURRAY	83.9
A009573	005463	002847	05/01/1939	Lyons Land Management, L.P.	4781.8
A001633	000784	002072	01/20/1920	PHILIP DICKERSON	1518.3
A011390	006631	007451	05/04/1946	RICHARD MARCHY	818.2
A004607	002357	002071	05/26/1925	PHILIP DICKERSON	356.6
A009301	005192	004576	05/20/1938	K AND T RANCHES	1066.1
A015371	009578	005478	06/08/1953	WILLIAM J HALL	91.2
A005269	002727	001173	11/15/1926	HOY REVOCABLE TRUST DATED SEPTEMBER 16 1999	635.4
A012674	007675	007556	09/02/1948	Couchman Brothers	1622.7
A012396	007348	004949	03/11/1948	MICHAEL R VAN ATTA	487.9
				Total:	13,634

The total amount of face value demand is approximately 13,634 acre-feet. The release ofminimum required flows exceed this minimal demand and provide sufficient supply to provide water for the 13,634 acre-feet of demand. However, even if the face value of existing rights were added to the required minimum flows (170 TAF), the total demand would be approximately 184 TAF. If this amount is subtracted from the gaged flow in the same time period (2,842 TAF), it suggests that in 2017, there was approximately 2,700 TAF of water available for appropriation.

3.2. Lower San Joaquin River to Vernalis

3.2.1.Lower San Joaquin Measurement

Water available for appropriation on the Lower San Joaquin River was determined with a similar analysis as performed on each source stream. The daily record of flow in the SJR at Vernalis (USGS gage 11303500) was compiled and used as a starting point. Daily observed flow was reduced to account for minimum required flows and the face value of existing water rights and claims. Figures 4.7 and 4.7.1 provide the historic gaged data for Vernalis flows.

Figure 4.7

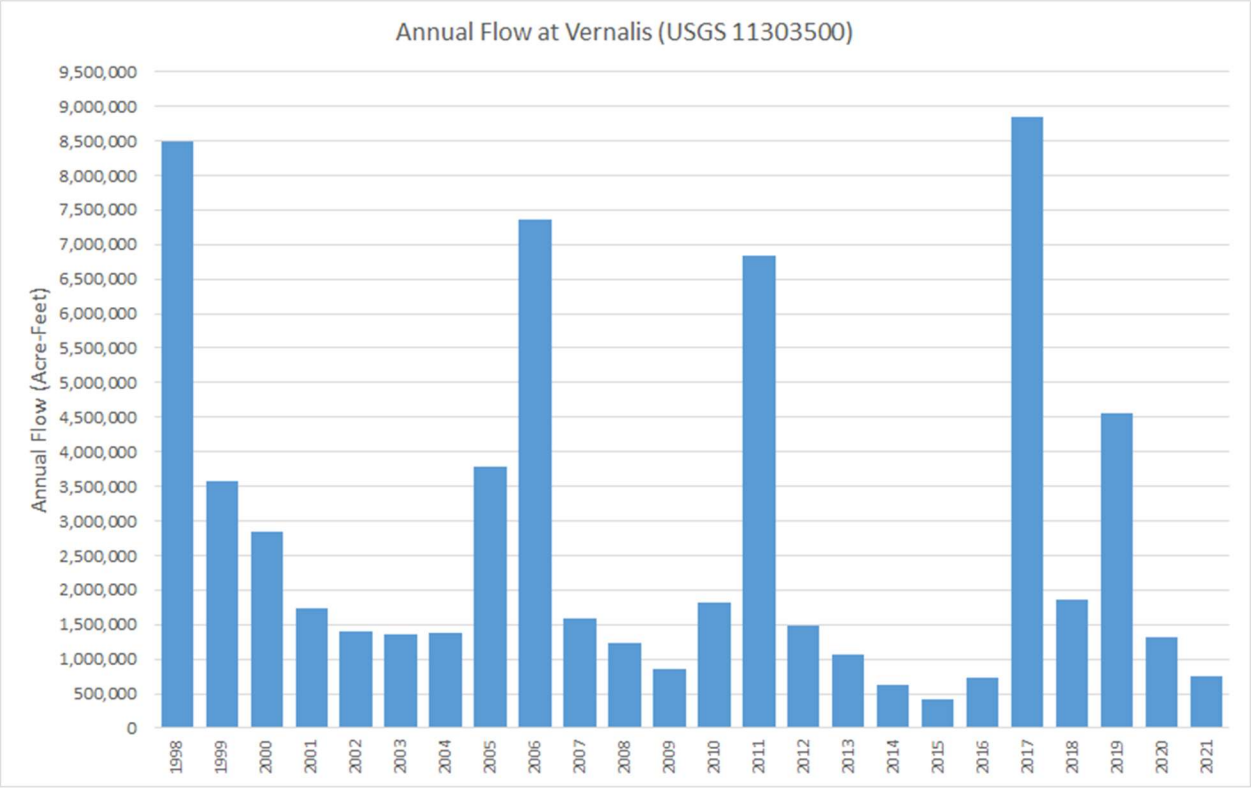
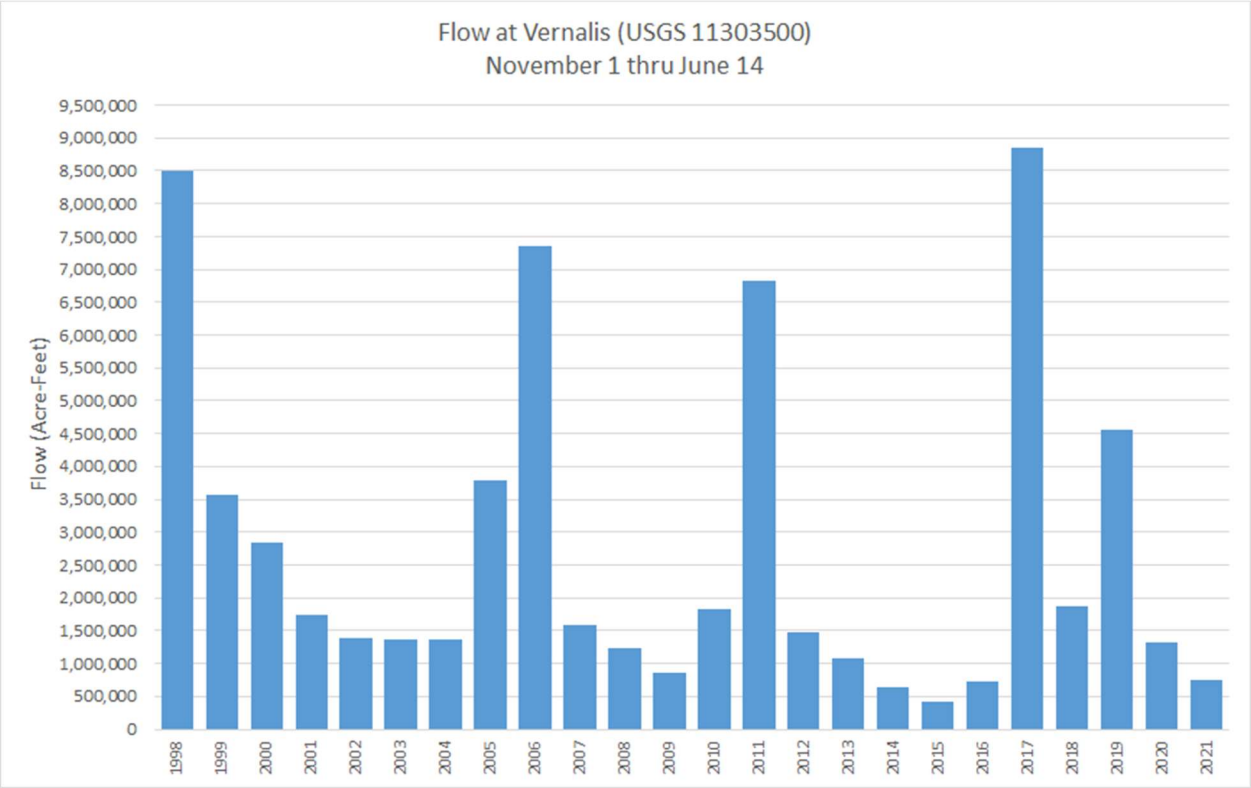


Figure 4.7.1



3.2.2.Minimum Required Flow

Minimum required flows for the SJR at Vernalis are defined in State Water Resources Control Board Decision 1641 (D-1641). Required flows under D-1641 are specified by San Joaquin Valley Water Year Type as determined from the annual calculated index. Figure 4.8 is a summary of the minimum flow requirements from D-1641. There are currently no required minimum flows at Vernalis outside of the periods identified in Figure 4.8. There are year-round water quality requirements at Vernalis that the U.S. Bureau of Reclamation is currently responsible for meeting. An assumed minimum flow at Vernalis of 1,000 cfs was assumed in the Water Availability Analysis (WAA) Tool for months without a minimum flow requirement in D-1641, July through September and November through January. This value was selected based on the current requirement for October, and the State Board's current Phase I update to the Bay-Delta Water Quality Control Plan. Phase 1 includes a minimum flow requirement of 1,000 cfs at Vernalis, though only for the February through June period. A minimum flow requirement of 1,000 cfs was assumed to ensure a more conservative analysis of water availability on the Lower SJR.

Figure 4.8: D-1641 Minimum Flows for San Joaquin River at Vernalis

Period	Wet	Above Normal	Below Normal	Dry	Critical
Feb 1 – April 14	2,130 or 3,420*	2,130 or 3,420	1,420 or 2,280	1,420 or 2,280	710 or 1,1,40
Apr 15 – May 15	7,330 or 8,620	5,730 or 7,020	4,620 or 5,480	4,020 or 4,880	3,110 or 3,540
May 16 – Jun 30	2,130 or 3,420	2,130 or 3,420	1,420 or 2,280	1,420 or 2,280	710 or 1,1,40
October	1,000	1,000	1,000	1,000	1,000

*Higher flows are applicable when the position of the two parts per thousand isohaline line (X2) is required to be at or west of Chipps Island.

3.2.3.Existing Water Rights and Claims

The eWRIMS database was reviewed to identify all existing water rights and claims for the Lower SJR from the confluence with the Tuolumne River to Vernalis. Identified rights and claims were reviewed for the season of use and the diversion rate. This analysis identified licenses, permits, and claims that had an identified face value amount to estimate the demand for existing rights illustrated in Figure 4.9.

Figure 4.9

Permit ID	License ID	Status Date	Primary Owner	Face Value Amount	Amount Diverted 11/1-6/14/17
003448	001295	10/26/1929	DONALD M HEINY	190.2	5
008012	004468	01/30/1950	MARGARET A MASSEY	621.1	72
003386	003044	08/03/1929	MOONSHINE DAIRY	868.8	39
001011	001280	10/10/1919	EL SOLYO WATER DISTRICT	22806.4	3916.46
002255	001064	06/06/1931	TWIN OAKS IRRIGATION COMPANY	10560.4	858
008011	005434	01/31/1950	Cerutti Bros Inc	2650	0
002758	003957	07/08/1954	WEST STANISLAUS IRRIGATION DISTRICT	189790.7	12501
001816	002883	10/22/1947	CITY OF MODESTO	1219.9	0
002337	001155	03/22/1932	JUDITH HOUK MURPHY	1496.4	174
008013	004469	01/30/1950	JUDITH HOUK MURPHY	424.5	54
010345	009816	10/10/1955	HEIDI BAKER	230	0
021372		08/29/2016	CITY OF TURLOCK	13393	0
000588	004934	02/26/1919	NBINV AP6 LLC	15897.8	52.5
002647	009194	08/13/1926	DEUEL VOCATIONAL INSTITUTION	1575	323.125
003365	006067	07/24/1929	RICHARD AND MIKKI RIELLA 2006 FAMILY TRUST	2220.1	28.325

001925	000701	04/12/1928	AMARJIT SINGH GURAYA	1094.8	7.5
002245	002080	09/03/1940	MOSSDALE ASSOCIATES	1185.7	0
002161	001270	02/16/1933	IVAN CERRI	176.7	44.11
008071	009228	05/02/1950	SAN JOAQUIN RIVER WATER USERS CO, INC	6637	2263.575
006780	003433	12/27/1946	IVAN CERRI	59.21	14.7
011452	007143	01/17/1958	Mary Hildebrand Revocable Trust	127.9	0
011455	006431	01/17/1958	CARDOZA HOME RANCH	386.8	0
012088	007609	05/15/1959	PHELPS RANCH LLC	1056.2	80.915
002591	001334	03/05/1926	RECLAMATION DISTRICT #2037	61863.9	38474.23
003572	005476	03/24/1959	Banta-Carbona Irrigation District	15108.9	5340
003807	001680	04/13/1931	MARIO JAQUES	547.5	108.255
001417	001406	03/19/1924	DELTA FARMS R D #2027	30086.4	0
			Totals:	382275.31	64356.695

Data illustrated in Figure 4.9 reflect the number of water right holders on the Lower San Joaquin River that have a right to divert water during the Application period of November 1 to June 14. The face value of rights held during that time overstates the amount that is allowed to be diverted during the Application period because many of the rights allow diversion year-round or otherwise outside the specific Application period. The face value of rights that include the right to divert sometime during the Application period is some 382 TAF. The estimated quantity of water diverted by these water right holders during the November through June 14 period is about 64 TAF. The analysis subtracted the demand illustrated in Figure 4.7.1 from the daily record of SJR flow at Vernalis to calculate the water available. The water available for appropriation on the Lower SJR reach was calculated as follows:

Flow Vernalis – D-1641 min flow or 1,000 cfs * 1.983471 * days in period – water right demands

7,330,000 acre-feet – 1,000 cfs * 1.983471 * 226 – 64,356 acre-feet

7,330,000 – 448,264 – 64,356 = 6,817,380 ≈ 6,817 TAF

3.3. The Delta

Analysis for the Delta relies on a historical record of Delta conditions as being either in balanced or excess condition. Delta conditions are defined in the 1986 Coordinated Operations Agreement (COA) between the United States and the State of California on the coordinated operations of the Central

Valley Project (CVP) and State Water Project (SWP). COA defines balanced conditions as “periods when it is agreed that releases from upstream reservoirs plus unregulated flow approximately equal the water supply needed to meet Sacramento Valley inbasin uses, plus exports”. Similarly, COA defines excess conditions as, “periods when it is agreed that releases from upstream reservoirs plus unregulated flow exceed Sacramento Valley inbasin uses, plus exports”. Generally, balanced conditions define periods when the CVP and SWP are controlling Delta outflow and all of the water currently in the system, whether it is released from upstream reservoirs or unregulated flows, is used for a specified purpose including meeting water quality and Delta outflow requirements.

CVP and SWP operators determine and agree on Delta conditions. CVP Operations Office posts a daily report that accounts for water use and sharing between the two projects under COA and includes Delta conditions. The daily record of Delta conditions was used in the WAA Tool to address the Delta. Water is only considered to be available for appropriation on days when the Delta was in an excess condition. For the analysis that supports this Application, the Districts provide the following Figures 4.10 and 4.10.1, which show that there are high flow years in which significant water is available for appropriation during the November 1 through June 14 period when the Delta is in excess conditions.

Figure 4.10

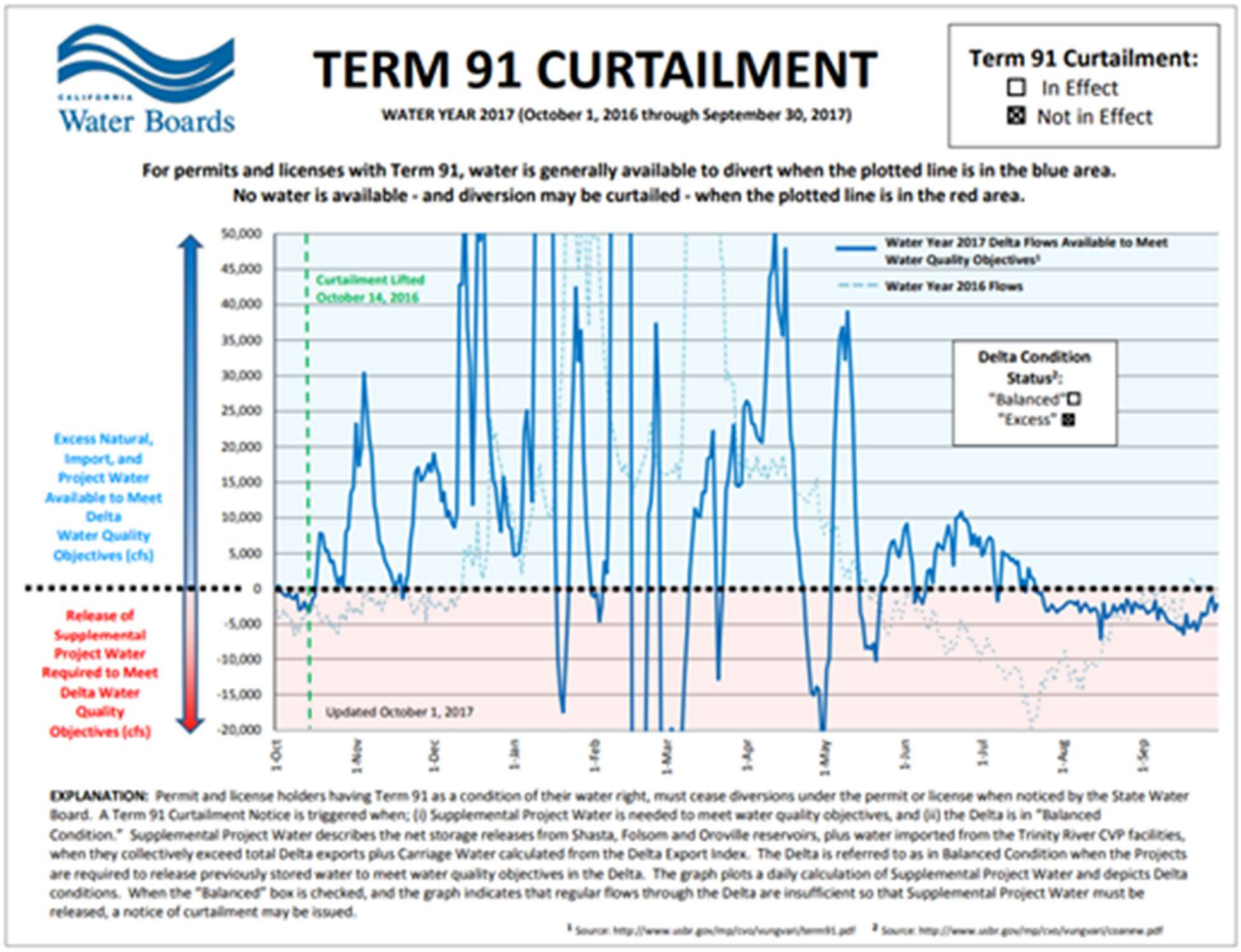

CALIFORNIA
Water Boards
TERM 91 CURTAILMENT
WATER YEAR 2017 (October 1, 2016 through September 30, 2017)
Term 91 Curtailment:
In Effect
Not in Effect
For permits and licenses with Term 91, water is generally available to divert when the plotted line is in the blue area.
No water is available - and diversion may be curtailed - when the plotted line is in the red area.
Excess Natural, Import, and Project Water Available to Meet Delta Water Quality Objectives (cfs)
Release of Supplemental Project Water Required to Meet Delta Water Quality Objectives (cfs)
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
-5,000
-10,000
-15,000
-20,000
Curtailment Lifted October 14, 2016
Water Year 2017 Delta Flows Available to Meet Water Quality Objectives[1]
Water Year 2016 Flows
Delta Condition Status[2]:
"Balanced"
"Excess"
Updated October 1, 2017
1-Oct
1-Nov
1-Dec
1-Jan
1-Feb
1-Mar
1-Apr
1-May
1-Jun
1-Jul
1-Aug
1-Sep
EXPLANATION: Permit and license holders having Term 91 as a condition of their water right, must cease diversions under the permit or license when noticed by the State Water Board. A Term 91 Curtailment Notice is triggered when; (i) Supplemental Project Water is needed to meet water quality objectives, and (ii) the Delta is in "Balanced Condition." Supplemental Project Water describes the net storage releases from Shasta, Folsom and Oroville reservoirs, plus water imported from the Trinity River CVP facilities, when they collectively exceed total Delta exports plus Carriage Water calculated from the Delta Export Index. The Delta is referred to as in Balanced Condition when the Projects are required to release previously stored water to meet water quality objectives in the Delta. The graph plots a daily calculation of Supplemental Project Water and depicts Delta conditions. When the "Balanced" box is checked, and the graph indicates that regular flows through the Delta are insufficient so that Supplemental Project Water must be released, a notice of curtailment may be issued.
[1] Source: http://www.usbr.gov/mp/cvo/vungvar/term91.pdf [2] Source: http://www.usbr.gov/mp/cvo/vungvar/csanew.pdf

Figure 4.10.1

Water Year	Flow Available During Excess Conditions or No Curtailment, November 1 thru June 14 (Acre-Feet)	Time of Balanced Conditions and Curtailment, November 1 thru June 14
1998	1,277,553	
1999	661,505	
2000	434,182	
2001	98,594	6/4–6/14
2002	13,114	
2003	24,752	11/1–11/15
2004	118,360	5/29–6/14
2005	863,773	
2006	1,571,398	
2007	21,242	5/15–6/14
2008	10,235	6/2–6/14
2009	8,335	11/1–11/15, 6/11–6/14
2010	207,319	
2011	1,611,435	
2012	20,168	
2013	10,318	5/7–6/14
2014	506	11/1–12/31, 1/12–2/10, 3/1–6/14
2015	5,715	11/1–11/26, 4/30–6/14
2016	7,130	11/1–12/15, 6/2–6/14
2017	2,672,255	
2018	267,634	6/1–6/14
2019	1,081,405	11/16–12/31
2020	27,956	6/5–6/14
2021	5,587	11/1–12/31, 4/29–5/31

3.3.1.Complete Flow Path

The final step of the water availability analysis combines the three separate reaches described above into a single, daily analysis from the points of diversion included the Application through the Delta. Water available on the Tuolumne River is compared with water available on the Lower SJR, on days when the Delta was in an excess condition.

3.3.2.Results

The following sections present a summary of the water available for appropriation and estimated diversions under the Application. Water available for appropriation is the water remaining after consideration of existing face value water rights and minimum in-stream flow requirements, but not

limited by the proposed diversion capacities for each point of diversion. Estimated diversions are calculated as the water available for appropriation at the point of diversion, at Vernalis, and in the Delta based on determination of excess conditions.

3.4. Conclusions

The analysis and results described in this report support the following conclusions in support of Application.

- There is a reasonable likelihood of water available for appropriation from the Tuolumne River, especially during wet years.

- The Application period is from November 1 through June 14, when the Tuolumne River is not fully appropriated.

- During high flood flow events, there is water available for appropriation. The most recent 2017 high flow event suggests that year there was approximately 2,700 TAF of water available for appropriation after accounting for existing demand and flow requirements.

ATTACHMENT 5

JUSTIFICATION OF AMOUNTS REQUESTED

Contents

The purpose of this document is to provide an overview of the justification for the quantities identified in support of the Districts' Application to Appropriate Water (Application). The following is an initial summary for the purposes of use proposed in the Application, particularly focused on areas within the Turlock and Modesto Groundwater Subbasins, which is the vast majority of the area within the proposed place of use identified in the Application. See responses to Sections 4 and 10 in the Application for additional background. Additional data and analyses are available to the Division upon request.

1. Irrigation

In regard to irrigation uses, based on data collected by the Turlock and Modesto Subbasin groundwater sustainability agencies for the development of the Groundwater Sustainability Plans (GSP), approximately 245,000 acres of farmland are irrigated within the Turlock Subbasin and 158,000 acres within the Modesto Subbasin. This acreage is comprised of a variety of crops, such as those in including but not limited to, almonds and other deciduous trees, corn, grains, pasture, vines, citrus, and truck crops. These crops are irrigated using a variety of irrigation practices such as, but not limited to flood, sprinkler, and drip. For irrigation purposes, water use generally occurs between March through the end of October. Within the Turlock Subbasin, the total groundwater use for agricultural purposes is estimated 351,000 acre-feet, or approximately 86% of the total applied water within the subbasin, and 248,000 acre-feet average annual total groundwater use for agricultural purposes within the Modesto Subbasin.

Total groundwater pumping was estimated at approximately 410,000 acre-feet (AF), as indicated in Table 2-1 of the Turlock Subbasin GSP. Total groundwater pumping was estimated at approximately 311,000 AF, as indicated in Table ES-1 of the Modesto Subbasin GSP. This groundwater pumping occurs to supplement the available surface water supply. Other landowners and entities within the subbasin meet water demands using a combination of groundwater and surface water deliveries as well, with the majority of the water demand met by groundwater pumping.

2. Municipal, Industrial, and Domestic

Based for the groundwater basin prioritization process under SGMA, approximately 39,000 AFY of groundwater pumping occurs to meet urban demands within the Turlock Subbasin and 63,000 AFY in the Modesto Subbasin. The cities of Turlock and Ceres account for most of the urban production in the Turlock Subbasin, but numerous other communities are also entirely reliant on groundwater for their drinking water supply including Hilmar, Delhi, Keyes, Denair, Hughson, and Hickman. In addition, the City

of Modesto operates water supply wells within the Turlock Subbasin as part of its South Modesto service area. The cities of Modesto, Oakdale, Riverbank, and Waterford account for most of the urban production in the Modesto Subbasin. DWR's 2010 population estimate within the Turlock Subbasin is approximately 197,605 people and 294,872 people within the Modesto Subbasin. Much of the time municipal and industrial needs within the proposed place of use are currently met by groundwater pumping. The total groundwater pumping includes both groundwater pumped by urban utilities and groundwater produced by small private residential water systems, commercial businesses and industrial plants not served by the major utilities.

Turlock Irrigation District will begin providing surface water to the Stanislaus Regional Water Authority in 2023 when a new regional drinking water project comes online. Initially, TID will provide up to 15,000 AF/yr to the SRWA who will treat the water to drinking water standards and provide it to the Cities of Ceres and Turlock who will use the treated surface water conjunctively with groundwater. As the Cities' demand for drinking water increases and/or groundwater quality continues to worsen, the SRWA project has a planned expansion to 30,000 AF/yr. Longer term projections for the project indicate, however that 50,000 AF/yr. of treated surface water may be necessary to meet region's demands for a safe reliable drinking water supply that complies with all state and federal water quality standards.

The Cities of Modesto and Turlock are the two largest cities in the County and are the main locations for the region's important food processing industries. For instance, the City of Turlock is home to Foster Farms (turkey processing), California Dairies (milk products), Superstore Industries (milk products), Blue Diamond Growers (almonds), and Valley Milk (powdered milk). Industrial water use accounts for approximately 20% of all potable water use in Turlock. Similarly, the City of Modesto is the public water supplier to a number of industries such as E & J Gallo Winery, Frito Lay, Inc. (snack food), and Stanislaus Foods (tomato processing).

A provision in the Water Sales Agreement between TID and the SRWA is that during drier years, the allotment to the SRWA is reduced in an amount similar to any reduction to irrigation water supply to the TID's growers. A groundwater banking program for drinking water customers would provide an opportunity to store water in wetter years to overcome cutbacks in drinking water supply in drier years. Turlock and Ceres will provide a blend of surface water and groundwater to their drinking water customers. Augmenting the aquifer below those two communities will ensure that groundwater is available in years when surface water supplies are reduced.

The SRWA has committed to providing water to other communities in the region who may need to augment their drinking water supplies with treated surface water that complies with all state and federal drinking water standards. Other Public Water Systems in the region are entirely dependent upon groundwater which is a diminishing supply of worsening quality. Common drinking water contaminants in the region include, but are not limited to: arsenic, nitrates, PCE, TCP, and Chromium-6. The SRWA has had exploratory conversation with other regional public water agencies, some of whom are Disadvantaged Communities (DACs). Therefore, a more reliable supply of treated surface water or groundwater recharge with high quality surface water could augment drinking water supplies in the region, consistent with the State of California's legislation recognition of the Human Right to Water in AB 651 of 2012.

The Modesto Regional Water Treatment Plant is owned and operated by the MID. Completed in late 1994 and expanded in 2016, the plant provides a quality drinking water supply for Modesto area residents.

The Plant now treats and delivers up to 67,000 acre-feet per year to the City of Modesto, supplementing the City's groundwater supply. The treatment process produces water that meets state and federal drinking water standards. In 2020, approximately 50% of the water supplied by the City of Modesto was from groundwater wells and 50% was from surface water.

3. Instream Use for Fish and Wildlife

As part of the Final Environmental Impact Statement (FEIS) for the Don Pedro Relicensing Project, the Federal Energy Regulatory commission (FERC) has required a new flow regime for the operation of Don Pedro Reservoir. The proposed flow regime is intended to enhance conditions for salmonid species by augmenting instream flows, regulating water temperature, providing pulse flows to mimic the natural hydrograph, and providing additional spawning and rearing habitat.

The Application will support the Districts' acquisition of water supply reliability to support benefits for instream beneficial uses on the Tuolumne and San Joaquin Rivers. The instream uses may be in response to proposed regulations, in support of a voluntary settlement agreement, public trust requirements or other habitat programs developed by the Districts and regional partners. The following instream beneficial uses will be protected through the Application:

- Improve rearing conditions for juvenile salmonids
- Increase flows to facilitate or encourage fish migration

- Encourage riparian plant growth with wetted banks
- Increase flows to clean spawning gravels of fine sediments
- Create shallow water habitat
- Improve floodplain habitat
- Enable the Districts to dedicate instream flows and maintain water supply reliability through conjunctive use

The Application would allow for the diversion of surface water in high flow years, with storage of these flows in the underground aquifer and / or in newly constructed off-stream storage reservoirs. The ability to later extract that stored water would support the dedication of an increased quantity of water to remain instream in dry year types; allowing conjunctive use to support instream flow dedication for fish and wildlife benefits.

4. Recreational

The Turlock and Modesto Subbasins contain a State Park and Regional Parks, California Department of Fish & Wildlife (CDFW) owned and operated lands and conservation easements, California Conservation Easements, Flood Local Maintenance Areas and Federal Lands, as listed below:

•Turlock Lake State Recreational Area (a State Park and Federal Land along the Tuolumne River)

• Modesto Reservoir Regional Park

•Fox Grove Fishing Access along the Tuolumne River

•Flood Local Maintenance Areas along the San Joaquin River

•Federal Land (data from the Bureau of Land Management) along the Merced, San Joaquin and Tuolumne rivers, as well as within the City of Turlock

In addition, three recreational areas of the New Don Pedro reservoir have been developed with funds contributed by the State of California: Fleming Meadows, Blue Oaks and Moccasin Point. Camping facilities, picnic areas, fish cleaning stations, boat ramps, a swimming lagoon, and marina are among some of the improvements offered at various sites.

5. Incidental Power Generation

The Districts have been delivering power to retail customers since 1923. Don Pedro's power plant occupies the entire width of the river channel at the toe of the dam. The facility is an outdoor structure,

constructed of reinforced concrete and originally contained three 45,500 kilowatt generating units driven by three 70,000 horsepower turbines. In 1989 a fourth unit was added and today; the plant operates three 55,000 kW and one 38,000 kW generators each 85,000 horse power bringing the total capacity of the plant to 203 megawatts. The plant generates an average of 618.4 million kilowatt hours (KWh) of electricity each year, equal to an average output of 70.6 MW.

Each of these beneficial uses and the future of water supply reliability depends on the ability of local management to capture more water during high flood flow years and store that water to ensure each of the above beneficial uses continue to be served. The purpose of the Application is to provide increased reliability to each of the above beneficial uses and to meet future instream flow requirements.

The Districts anticipate using water from this Application for the generation of hydroelectricity through existing facilities at Don Pedro and La Grange Diversion Dam; however, to the extent future generation facilities are envisioned, the Districts will seek appropriate permitting that that time.

ATTACHMENT 6

WATER CONSERVATION EFFORTS

Contents

The following is a description of the Districts' recent projects to promote the conservation of water. Further information regarding water conservation efforts can be found in the TID and MID Agricultural Water Management Plans (AWMPs). TID's AWMP can be found at the following link: https://www.tid.org/irrigation/irrigation-information/ag-water-management-plan/. Similarly, MID's AWMP can be found at the following link: https://www.mid.org/water/awmp/awmp_2020_final.pdf.

1. TID Conjunctive Use and Pricing Structure

TID's historic pricing and water management practices enabled TID to conjunctively manage its surface water and groundwater resources. In normal and above normal water years, up to 48 inches per acre of available water (formerly referred to as an "allotment" of water the grower could purchase for a set fee) encourages growers to use surface water rather than pump groundwater. The majority of surface water applied but not consumed by the crop recharges the groundwater system. The recharge-maintained groundwater storage that is pumped in dry years to supplement reduced surface water supplies. Additionally, the available water in the allotment was reduced in dry years, increasing the cost to the grower by moving deliveries into the higher tiered water prices sooner. This not only encouraged conservation in dry years, but also provided additional revenue to cover costs associated with additional pumping needed to supplement reduced surface water supplies. In June of 2012, TID adopted a new volumetric pricing structure that became effective in 2013. This structure is designed to continue to support the District's critically important conjunctive management objectives, but also to comply with the requirements of SBx7-7. The new structure included a fixed (per acre) charge, combined with a four-tiered increasing block rate schedule. The new rate structure also includes a split schedule, with one schedule established for dry years, and another for normal or above normal years. As with the previous pricing structure described above, the new "dry" schedule is at a higher rate, to help recover the additional pumping costs incurred in dry years. With the new pricing structure in place, the TID Board of Directors no longer determines the allotment each year. Instead, the Board determines the type of water year (and therefore the water pricing schedule to be used for the given year) as well as the amount of water available for purchase, based on projected runoff, including the possibility of the occurrence of consecutive dry years, carryover storage, flows required to be delivered to the lower Tuolumne River and the availability of rented pumps. The process now used to determine the volume of available water is similar to that used previously to establish the annual "allotment." The current irrigation rate schedule (shown in Table 2.4) was adopted by the TID Board of Directors in 2015, when the 2013 rate schedule (described above) was updated to fund system improvements and operating costs. The current rates have been in effect since the start of the 2015 irrigation season. This structure

continues to support the District's critically important conjunctive management objectives, and to comply with the SBx7-7 requirements.

2. TID In-Lieu Service

TID also promotes in-lieu recharge in most years with normal and above normal precipitation. In these years, depending on carry-over storage, the TID Board of Directors may allow the sale of "replenishment water" to lands outside of, but adjacent to TID. This block of water is not always available. The bulk of these sales go to lands to the east of TID as a substitute for groundwater pumping for irrigation. These lands have no surface water supply, and groundwater pumping significantly impacts available groundwater supplies in the Subbasin. The District promotes groundwater recharge in those areas in years when surplus water is made available by selling the water at rates comparable to the cost to pump groundwater.

3. TID Rules Prohibiting Wasteful Practices

TID's Irrigation Rules require that all water be applied efficiently and used in a reasonable and beneficial manner (Rule 4.2.1). During an irrigation delivery, the irrigator is responsible for the water at all times after it leaves the TID distribution system (Rules 4.1.3 and 4.1.4). Irrigators who waste water intentionally or as a result of carelessness, improper field preparation, or neglected facility maintenance may be refused TID water until the cause of the condition is remedied (Rule 4.2.2).

4. SCADA

TID began installing a Supervisory Control and Data Acquisition (SCADA) system in 1997, with data collection beginning in 1998. Today, TID collects water measurement data from 397 SCADA sites, including nine miles of Rubicon Total Channel Control (TCC) automation and remote drainage pump controls.

5. TID Operational Analysis and Planning for Conservation

In 2019, TID completed a multi-year planning effort that resides in the Draft TID Irrigation Facilities Master Plan (IFMP). The IFMP evaluated existing service levels in TID, and then identified a comprehensive list of projects to strategically and cost-effectively rehabilitate and modernize TID irrigation facilities with the goal of conserving water while maintaining and improving the level of irrigation service provided to its growers.

The IFMP identifies and evaluates a suite of potential water conservation and canal modernization projects for the District's water distribution infrastructure below Turlock Lake, including a variety of

projects such as regulating reservoirs and canal conveyance improvements. Projects are also being developed with the intent of allowing growers to adopt more efficient and productive on-farm irrigation systems, leading to increased water conservation over time as well as increased farm profitability. Projects have been conceptualized through input from TID staff at all levels and considering responses from 27 grower interviews that discussed existing and future cropping practices, irrigation systems, and water source preferences. The IFMP encompasses more than 50 work products, and provides a strategic plan for water conservation and modernization of TID's system in the coming years.

In 2019, TID also completed its Irrigation Delivery Operations Assessment that evaluated TID operational efficiency through comparison of efficiency indicators with other irrigation water suppliers in California, and through observation and interviews with WDOs. The assessment identified opportunities to improve efficiency through increased modernization of District software, strategic SCADA monitoring, and expanded training for District WDOs and other field staff. Irrigation Delivery Operations Assessment evaluated the efficiency and flexibility of TID's irrigation delivery system operations through (1) comparison of system parameters and deliveries between TID and other California irrigation water suppliers, and (2) evaluation of WDOs' activities and roles in providing high-quality and flexible irrigation deliveries. The assessment found that overall TID ranks high among the water suppliers that were evaluated for their operational efficiency. During peak-season operations, TID's WDOs provide, on average, the largest number of deliveries and the largest delivery volumes per hour worked among the suppliers that were compared. Observation and surveys of WDOs found that while TID's policies to provide flexible irrigation deliveries to customers pose operational challenges and complicate delivery scheduling.

6. TID Water Conservation Coordinator

TID established the position of water conservation coordinator in 1997 to encourage continued evaluation of efficient water management practices as a part of its Agricultural Water Management Planning activities. The coordinator works to prepare the Agricultural Water Management Plan (AWMP), developed in compliance with SBx7-7 and other legislative requirements, submitted to DWR and posted online on TID's website. The AWMP evaluates and documents the water management practices of the District, including, but not limited to:

- Engineering design services for ID facilities
- Private and Improvement District pump testing upon request

- Installation of CIMIS stations 168 (inactive) and 206 in Denair
- Link on TID web site to weather data from DWR CIMIS program and weather forecasts
- Private and Improvement District pump testing upon request
- Water use information by parcel available from TID at any time online, or upon grower's request, plus all growers receive a year-end water use report
- Information describing suitability of surface water, groundwater, and drain water quality for irrigation upon request
- Real time flows and storage for 6 surface water sites provided on TID website
- TID participates in DWR's CASGEM groundwater level reporting program
- Grower newsletter distributed quarterly
- TID has developed training videos for operation of irrigation and flow measurement facilities (e.g. Rubicon side gates) and posted them on its website
- TID provides remote data access describing delivery flows for side gates with Slip Meters and permanent Flume Gates
- Drought information page with extensive information to support on-farm water management during drought
- TID Drought Management Plan
- TID employs an assistant engineer with a background in agriculture who provides on-farm technical support to growers
- Services include support of micro/drip conversion and on-farm reservoir sizing
- TID has expanded its use of new virtual communications mediums (social media, etc.) to enhance grower engagement
- Occasional seminars for growers on various water management topics

7. MID Conjunctive Use and Pricing Structure

Conjunctive use of water has been practiced by MID for many years. The District uses groundwater supplies to supplement its water supply during dry years and as needed to minimize operational outflows by using wells to supply nearby water user needs rather than diverting water from several miles away. In addition to its own wells, the District's water treatment and supply agreement with the City of Modesto specifies that when requested by the City, the city may exchange some of its groundwater supply for a like amount of additional treated surface water. In addition to District wells, a large number of surface water users have also installed private groundwater pumps which they can use for irrigation during dry years. MID is also working jointly with the Stanislaus and Tuolumne Rivers

Groundwater Basin Association to comply with the Sustainable Groundwater Management Act, which requires that groundwater be managed sustainably with no net long-term overdraft. MID accomplishes this through a combination of continued improvements to water management, spill reduction, municipal water deliveries, potential future development of groundwater recharge basins and continued conjunctive use.

MID has also adopted a pricing structure based at least in part on volume used. MID implemented a tiered pricing structure and annual rate increases to encourage efficient water management consistent with MID's Rules and Regulations Governing the Distribution of Irrigation Water Within the Modesto Irrigation District. The tiered pricing structure was adopted in 2015. Therefore, growers have incentives to conserve water. In addition, over the last few years, the water pricing structure has increased the cost of water at a rate of about 10% per year but increased 40% in 2015. Furthermore, special Drought Surcharges are added to the water pricing structure to cover drought related operations, such as increased groundwater pumping and enforcement of Rules and Regulations.

8. MID In-lieu Service

Following a very wet water year in 2017, the Modesto Irrigation District Board of Directors directed staff to look at how surplus surface water could be made available to help with sustainable groundwater management within the Modesto Sub-basin. To accomplish this, the Groundwater Replenishment Plan was created and implemented. This voluntary plan is designed to deliver surface water to eligible landowners outside of MID's irrigation boundaries who are solely dependent on groundwater, but within MID's sphere of influence for the purpose of groundwater replenishment through in-lieu recharge. The surface water MID provides through the program is for agricultural use only and participants must demonstrate that surface water received is put to beneficial use. In 2018 the GRP provided over 2,000 acre-feet (AF) of surface water in lieu of groundwater pumping.

9. MID Rules Prohibiting Wasteful Practices

MID's Irrigation Rules and Regulations is provided to all MID irrigation customers. Failure or refusal of any Landowner, Renter or Irrigator to comply with any of these Irrigation Rules or applicable regulations, or any part thereof, may be sufficient cause for curtailment or termination of delivery of District water to the lands of such Landowner, Renter or Irrigator. Interference by any Landowner, Renter or Irrigator with a District employee, agent or official in the discharge of their duties may be sufficient cause for curtailing or terminating delivery of District water to the lands of such Landowner, Renter or Irrigator. The District may immediately terminate the delivery of District water supplied to any parcel of land if

the condition of the land or irrigation Facility present an immediate danger to any person, to the general public, or to any property, including but not limited to the flooding of property. Compliance with each and all of these rules shall be a condition precedent to the delivery of water to any Irrigator.

10. MID Operational Analysis and Planning for Conservation

Beginning in 2007, MID embarked on a Comprehensive Water Resources Management Plan (CWRMP) consisting of a variety of recommendations for policy and facility improvements to accommodate current and future water demands. The District's CWRMP is a multi-phase effort intended to incorporate elements of prior planning efforts, new information, and creative ideas into a comprehensive plan to guide future water management decisions. Decision makers, stakeholders, consultants, and staff benefit from a comprehensive picture of the issues and impacts related to water management in the district. The District's goals in developing the CWRMP were to:

- Address discharge water quality and regulatory risks;
- Improve operations efficiency and customer service;
- Plan for aging system replacement;
- Adapt to technology change;
- Plan for Federal Energy Regulatory Commission (FERC) relicensing so that the District can provide evidence to support its renewal application and minimize any negative impacts that might result from relicensing decisions; and
- Understand the options and opportunities available to the District for addressing current and future needs.

MID completed a Programmatic Environmental Impact Report (PEIR) for the CWRMP. The PEIR is intended to provide a high-level analysis of the potential CWRMP impacts and set the stage for focused individual project specific environmental review as projects warrant and as resources allow. MID completed the PEIR in 2016. While implementation of the CWRMP is contingent upon funding, MID sees benefits in the CWRMP as an effort to identify better methods to manage the District's water resources. Potential funding mechanisms to implement the CWRMP are identified in the PEIR. The CWRMP is currently undergoing CEQA review and is expected to be released for public review in 2022.

11. MID Water Conservation Coordinator

MID has designated a water conservation coordinator who will develop and implement the water management plan and prepare progress reports. Through a Board Resolution, the MID Board of

Directors appointed the Assistant General Manager, Water Operations, as the Water Conservation Coordinator for Modesto Irrigation District.

ATTACHMENT 7

REGULATORY AND ENVIRONMENTAL INFORMATION

Contents

1. County and State/Federal Permits

TID and MID will be coordinating the counties within the proposed place of use regarding any necessary permits, including providing the details necessary for the application processes (e.g., construction related activity). TID and MID believes the existing facilities may be operated without additional permitting.

TID and MID will be coordinating with states and federal agencies regarding any necessary permits, including providing the details necessary for the application processes (e.g., construction related activity). TID and MID believes the existing facilities may be operated without additional permitting.

TID and MID representatives have not contacted CDFW staff but propose to do so following submittal of this application.

2. Environmental Document

No environmental document for the project has been completed at this time. TID will be lead agency and satisfy all requirements of the California Environmental Quality Act (CEQA).

Improvement projects included as part of the proposed overall recharge and flood management improvement Proposed Project are anticipated to provide recharge, flood management, and improved water supply benefits at both the local and regional level. Potential impacts during individual improvement project construction and operation are also expected and would be evaluated within three primary study areas:

Potential impacts to aquatic, terrestrial, and botanical resources and habitat, as well as other resources and issue areas (e.g., hydrology, cultural resources, and air quality) would be evaluated in detail as part of the required CEQA review process. Potentially significant impacts during the construction and/or operation phases of each of the actions and projects included as part of the overall Proposed Project anticipated to result in environmental effects would be disclosed and evaluated.

Appropriate mitigation (where feasible) would be identified and included as part of a Mitigation Monitoring and Reporting Plan (MMRP) to lessen impacts to a less than significant level as applicable. Environmental review would account for potential impacts to resources including fish and wildlife species and habitat presence, life stage effects, cultural and tribal resources, air quality, and other resources/issues as well as required permitting based on individual project effects including construction and operation timing. Coordination with appropriate State, federal, and local agencies including the California Department of Fish and Wildlife (CDFW), U.S. Fish and Wildlife (USFWS), and

National Marine Fisheries Service (NMFS) would occur as part of the CEQA review process, permitting, and through the SWRCB's permit process.

3. Waste/Wastewater

Any waste/wastewater potentially generated by the Proposed Project during construction or operation, (1) containing such things as sewage, industrial chemicals, metals, or agricultural chemicals, or (2) causing erosion, turbidity, or sedimentation will be addressed during the CEQA review process. All necessary permits and best management practices will be employed during construction and operation of the Proposed Project.

4. Archeology

The archeology analysis will be satisfied through the CEQA process. Portions of the Proposed Project area have been subject to cultural resources surveys, but the area would require an additional cultural resources assessment. It is recognized that additional study would be required for proposed improvements included as part of the Proposed Project. During the planning and design phase for infrastructure improvements and prior to ground-disturbing activities within previously undisturbed areas, the applicant would have a qualified archaeologist and architectural historian conduct a cultural resources inventory of the project locations of a particular facility or group of facilities and make evaluations for cultural resources as determined necessary.

ATTACHMENT 8

ENVIRONMENTAL SETTING AND PHOTOGRAPHS

Contents

1. Environmental Setting

1.1. Fish and Aquatic Resources in Don Pedro Reservoir

Don Pedro Reservoir extends upstream from Don Pedro Dam (located at RM 54.8) for approximately 24 miles at the normal maximum water surface elevation of 830 ft. The surface area of the reservoir at this elevation is approximately 12,960 ac, and the reservoir shoreline, including the numerous islands within the lake, is approximately 160 miles long. The watershed upstream of Don Pedro Dam is approximately 1,533 mi. The reservoir contains both native and non-native and game and non-game fish species, and because it thermally stratifies, supports viable warm-water and cold-water fisheries.

CDFW manages the Don Pedro Reservoir fishery as a put-and-take resource with substantial stocking and related fishing regulations and has characterized the resident trout and inland salmon fisheries of Don Pedro Reservoir as being totally dependent on hatchery supplementation. As part of its Inland Salmon Program, CDFW generally plants rainbow trout (O. mykiss), kokanee (O. nerka), and Chinook salmon in Don Pedro Reservoir annually. Don Pedro Reservoir is also managed by CDFW as a year-round fishery for black bass. The DPRA has been stocking black bass in the reservoir on an annual basis since the early 1980s, and because of the robust bass population supported by the reservoir, multiple fishing contests, permitted by CDFW, are held during most years.

1.2. Fish and Aquatic Resources in the Lower Tuolumne River

The lower Tuolumne River extends approximately 52 miles from La Grange Diversion Dam (RM 52.2) downstream to its confluence with the San Joaquin River (RM 0). The lower river can be divided into two broad geomorphic zones defined by channel slope and bed material. The upper zone (RM 24–52) is gravel-bedded with moderate slope (0.10–0.15%), whereas the lower zone (RM 0–24) is sand-bedded with a slope generally less than 0.03 percent.

The lower Tuolumne River contains a fish community similar to those found throughout the San Joaquin River Basin. Currently, hatchery-origin fish represent a large proportion of the Central Valley fall-run Chinook salmon escapement. Although precise estimates of the proportion of hatchery- and naturally-produced salmon cannot readily be discriminated in the historical record because hatchery-origin fish have not been consistently marked, straying of hatchery-origin fish has been documented in the Tuolumne River and has likely affected the numbers of salmon in annual spawning runs.

Physical habitat conditions in the lower Tuolumne River, from La Grange Diversion Dam (RM 52.2) to the confluence with the San Joaquin River, have been affected by a wide range of human actions conducted over many decades. Prior to widespread European settlement, channel form in the gravel-bedded zone

of the lower Tuolumne River (RM 24.0–52.1) consisted of a combination of single-thread and split channels that migrated and avulsed. Anthropogenic changes that have occurred in the lower Tuolumne River corridor since the mid1800s include gold mining, aggregate mining, grazing, agriculture, water management, and more recently, urban encroachment. Riverbed material has been excavated to depths well below the thalweg to mine gold and aggregate, eliminating active floodplains and terraces and creating large in-channel and off channel pits. A historical timeline of mining in the San Joaquin River's tributaries includes placer mining (1848–1880), dredge mining (1880–1960s), and sand and gravel mining (1940s– present). On the Tuolumne River, dredge mining during the early 1900s resulted in the excavation of channel and floodplain sediments and left dredger tailings deposits between RM 38.0 and 50.5. Large scale, off-channel aggregate mining continues today.

Agricultural and urban encroachment along the lower river, combined with a reduction in high flows and coarse sediment supply, have resulted in a relatively static channel within a floodway confined by dikes and agricultural uses. Many miles of riverbank have been leveed and stabilized with riprap by agencies or landowners. Levees and bank revetment extend along portions of the riverbank from near Modesto (RM 16) downstream through the lower San Joaquin River and Delta.

1.3. Fish Species in the Lower Tuolumne River

The distributions of native and nonnative fishes are influenced by water temperature and velocity, which vary by location, season, and in response to flow. Most native resident fish species are riffle spawners and are generally more abundant in the gravel-bedded reach (RM 24-52). Existing data show that the Sacramento sucker is the most abundant and widespread native fish species in the lower river. Non-native fishes are present throughout the lower river but are typically most abundant in the sand-bedded reach and the lower 6-7 miles of the gravel-bedded reach, where water temperatures are warmer and SRPs provide habitat. Sunfishes are the most abundant and widespread non-native fish in the lower river. The non-native predator fish community in the lower river includes largemouth, smallmouth, and striped bass (Morone saxatilis).

Native species in the lower Tuolumne River include Fall-run Chinook salmon (Oncorhynchus tshawytscha), steelhead or rainbow trout (Oncorhynchus mykiss), hardhead (Morone conocephalus), and Sacramento Splittail (Pogonichthys macrolepidotus).

Of the 22 non-native fish species documented in the lower Tuolumne River, 18 were introduced by state or federal agencies (CDFW, NMFS, USFWS, and the State Board of Human Health) between 1874 and 1954, and one was introduced with permission from CDFW (1967). The remaining three were introduced

by aquarists (goldfish [Carassius auratus] in 1862), catfish farms (red shiner [Cyprinella lutrensis] in 1954), or private individuals (common carp in 1877, although released in the same year by CDFW). Sixteen of the fish species released by state or federal agencies were introduced intentionally for sport or commercial fisheries, as a prey base for sport fish, or for mosquito control; two were introduced incidentally with shipments of sport fish. The most abundant and widespread non-native fish species in the lower Tuolumne River (bluegill, redear sunfish, and green sunfish) were first released in California between 1891 and 1954. Largemouth and smallmouth bass were first released in California by CDFW between 1874 and 1891.

2. Photographs

The attached photographs support the Application.

Aerial view of the Don Pedro Project (built 1971)

View of the Don Pedro Project looking directly at the dam and power house (Built 1971)

View of La Grange Diversion Dam (built 1893)

View of La Grange Diversion Dam during overtopping, TID hydrogenation facility shown on the right

La Grange Diversion Dam, MID diversion facility located on the left side of Diversion Dam

TID Diversion facility to TID Main Canal from La Grange Diversion Dam

TID Main Canal

Aerial of TID Canal section

MID Main Canal and Regulating Reservoir

MID Canal

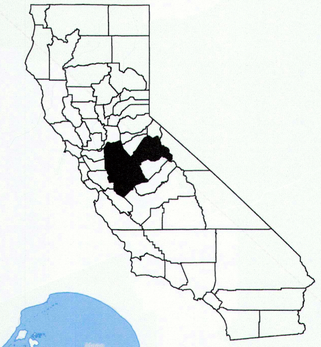
MID Water Treatment Facility

MID Water Treatment Facility

Infiltration galleries

Infiltration galleries

Exhibit A: Points of Diversion and Place of Use



San Joaquin County
As defined under
Government Code §29139

Tuolumne County
As defined under
Government Code §29155

Stanislaus County
As defined under
Government Code §23150

Merced County
As defined under
Government Code §23124

Point of Diversion
Don Pedro Dam
SW 1/4 of Sec. 3,
T.3S., R.14E M.D.B.&M.

Point of Diversion
Infiltration Galleries
SE 1/4 of NE 1/4 of Sec. 3,
& SW 1/4 of NW 1/4 of
Sec. 2, T.4S., R.10E.,
M.D.B.&M.

Point of Diversion
La Grange Dam
NW 1/4 of SW 1/4 of
Sec. 16, & NE 1/4 of
SE 1/4 of Sec. 17, T.3S.,
R.14E., M.D.B.&M.

New Melones Lake
Don Pedro Reservoir
Lake McClure
Woodward Reservoir
Modesto Reservoir
Turlock Lake
Tuolumne River
Stanislaus River
San Joaquin River
Merced River

TID Laterals and Canals
MID Laterals and Canals
Point of Diversion
Proposed Place of Use Boundary
NHD Major Lakes And Reservoirs
NHD Major Rivers
County Outlines
PLSS Townships

N

0 10 20 40 Miles

Data Sources

1. Irrigation conveyance facilities, and existing or proposed points of diversion based on best known data compiled from Turlock and Modesto Irrigation District records.
2. PLSS Township data provided by U.S. Bureau of Land Management.
3. County outlines provided by U.S. Census Bureau 2016 MAF/TIGER database.
4. Rivers, Lakes and Reservoir data provided by USGS National Hydrology Dataset.

No field surveys have been performed in connection with the development of this map.

Certification

I, Tristan S. Higgins, PLS, hereby certify that this map was made by me or under my direction at the request of the Turlock Irrigation District and Modesto Irrigation District, and correctly represents the record location of the shown existing works of the Districts, and the existing and proposed points of diversion and place of use included in the accompanying application.

T. S. Higgins

Tristan S. Higgins, PLS 9048

PROFESSIONAL LAND SURVEYOR
TRISTAN S. HIGGINS
NO. PLS 9048
1-25-22
STATE OF CALIFORNIA

Exhibit B: Potential Off-Stream Storage Project Locations

New Melones Lake

New Melones Off-Stream Reservoir

Tuolumne County
As defined under Government Code §29155

Stanislaus County
As defined under Government Code §29150

Merced County
As defined under Government Code §29124

Upper Cooperstown Off-Stream Reservoir

Lower Cooperstown Off-Stream Reservoir

Roberts Ferry Off-Stream Reservoir

Cardoza Lake Off-Stream Reservoir

Dickenson Lake Off-Stream Reservoir

Montgomery Lake Off-Stream Reservoir

Don Pedro Reservoir

Lake McClure

Modesto Reservoir

Turlock Lake

Stanislaus River

Tuolumne River

Merced River

- TID Laterals and Canals
- MID Laterals and Canals
- Approximate Proposed Off-Stream Reservoir Locations
- Proposed Place of Use Boundary
- NHD Major Lakes And Reservoirs
- NHD Major Rivers
- County Outlines
- PLSS Townships

N

0 2.5 5 10 Miles

Data Sources

1. Irrigation conveyance facilities, and approximate location of proposed off-stream storage projects based on best known data compiled from Turlock and Modesto Irrigation District records.
2. PLSS Township data provided by U.S. Bureau of Land Management.
3. County outlines provided by U.S. Census Bureau 2016 MAF/TIGER database.
4. Rivers, Lakes and Reservoir data provided by USGS National Hydrology Dataset.

Certification

I, Tristan S. Higgins, PLS, hereby certify that this map was made by me or under my direction at the request of the Turlock Irrigation District and Modesto Irrigation District, and correctly represents the record location of the shown existing works of the Districts, and the approximate proposed off-stream storage project locations included in the accompanying application.

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